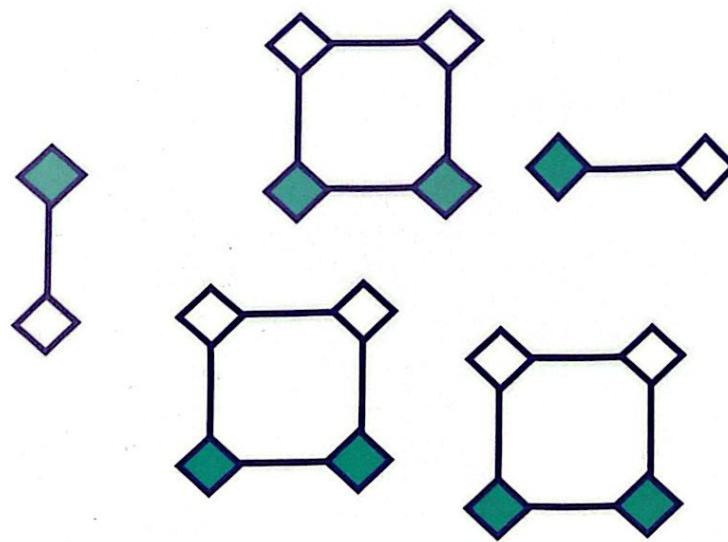


# 11+ Non-verbal Reasoning Practice

## Ages 10–11



Series editor Tracey Phelps,  
the 11+ tutor with a

**96% PASS RATE**

# Contents

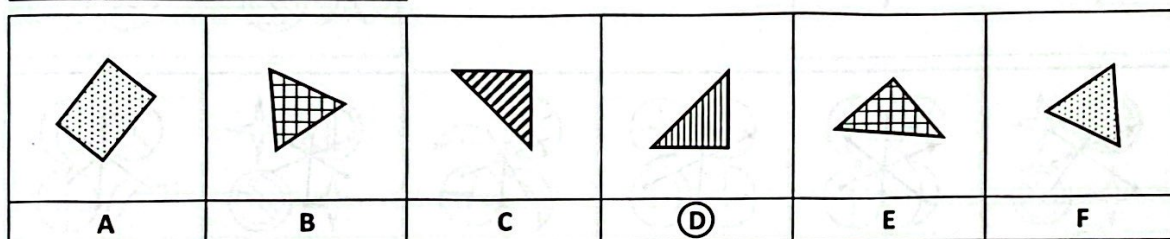
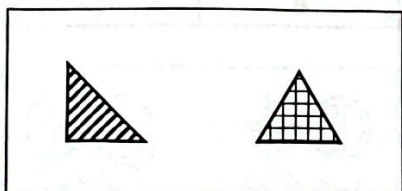
About the CEM Test.....	4
Similarities .....	5
Differences.....	10
Analogies.....	13
Sequences.....	18
Grids.....	23
Rotations.....	29
Reflections.....	34
3D and Spatial Reasoning.....	39
Codes.....	45
Mixed Test 1.....	51
Mixed Test 2.....	57
Answers .....	63



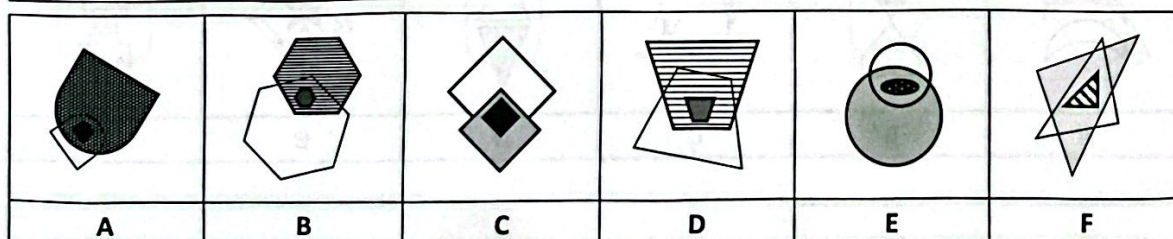
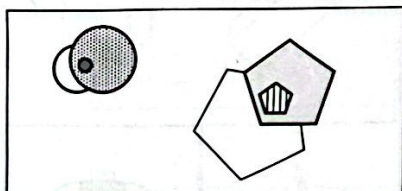
# Similarities

Find the shape that is most like the shapes in the box on the top left of each question. Circle one of the options A–F.

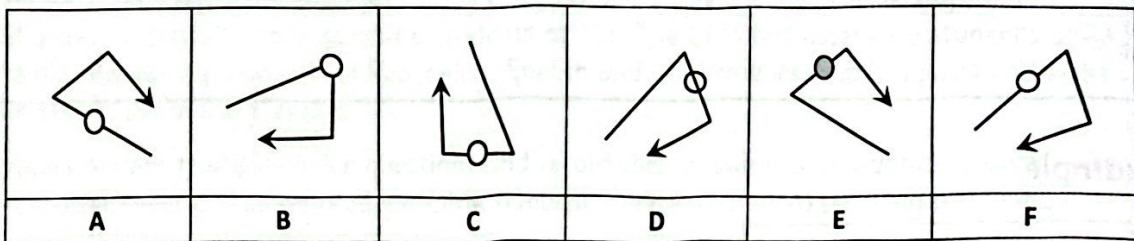
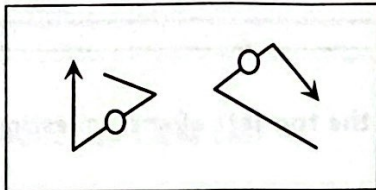
Example



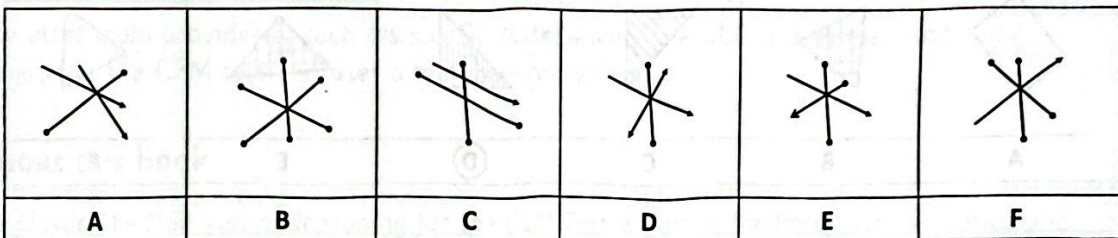
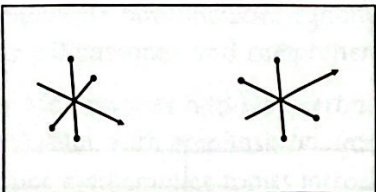
1



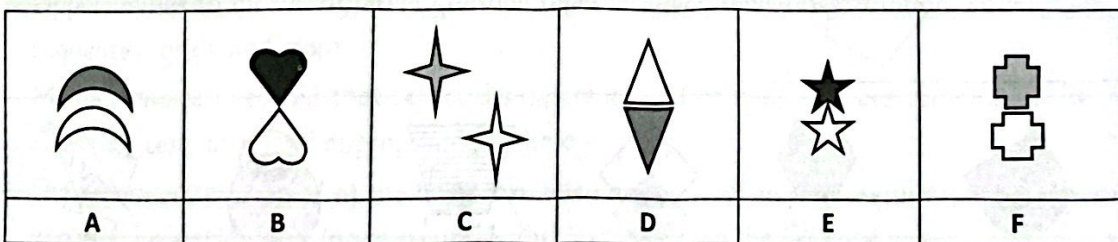
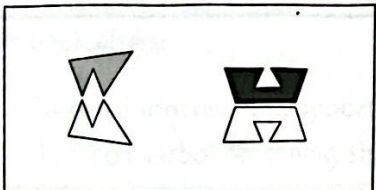
2



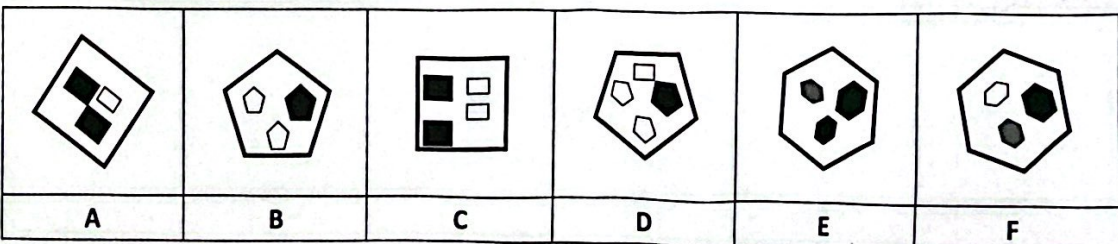
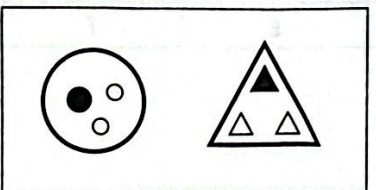
3



4

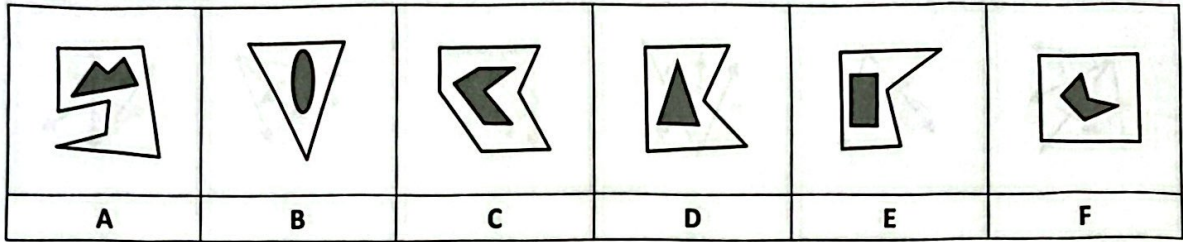
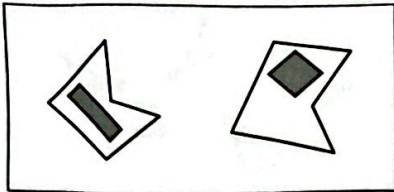


5

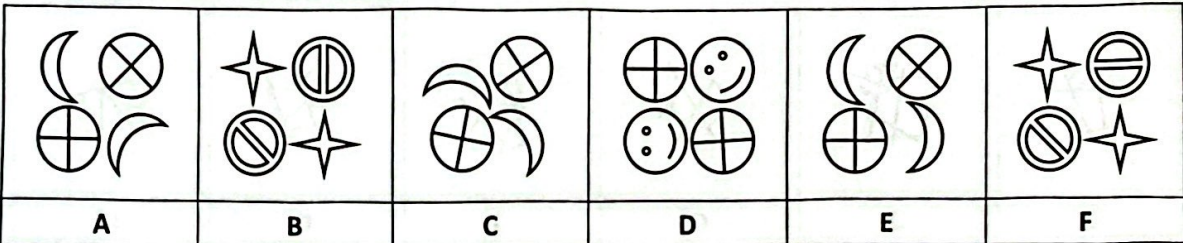
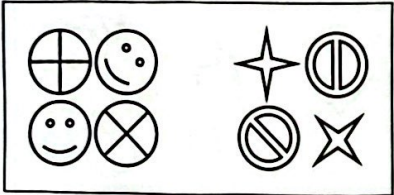




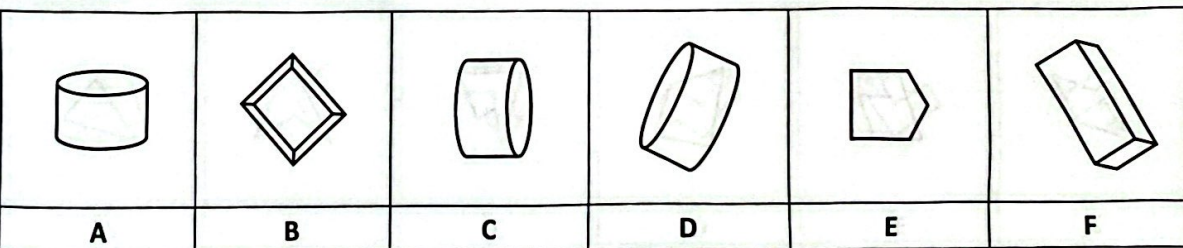
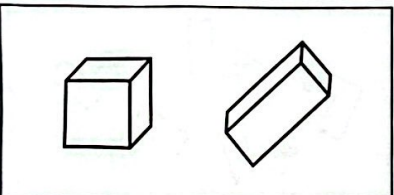
6



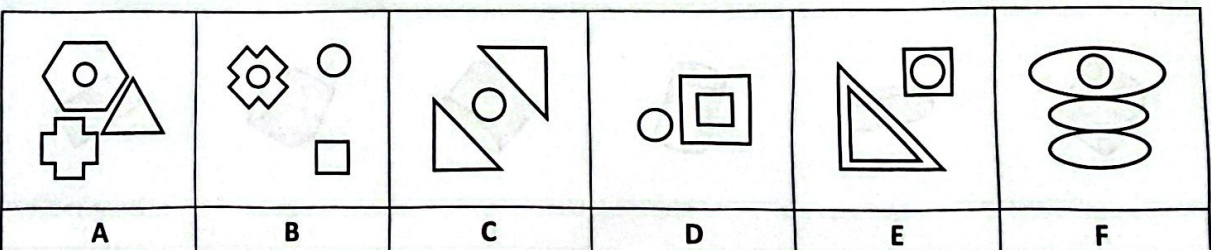
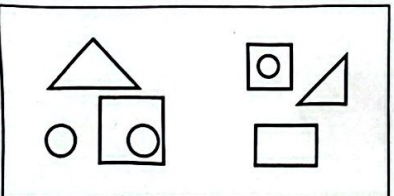
7



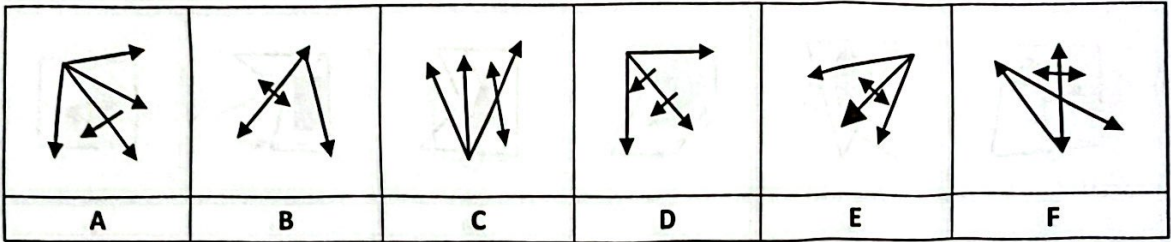
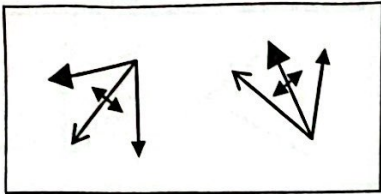
8



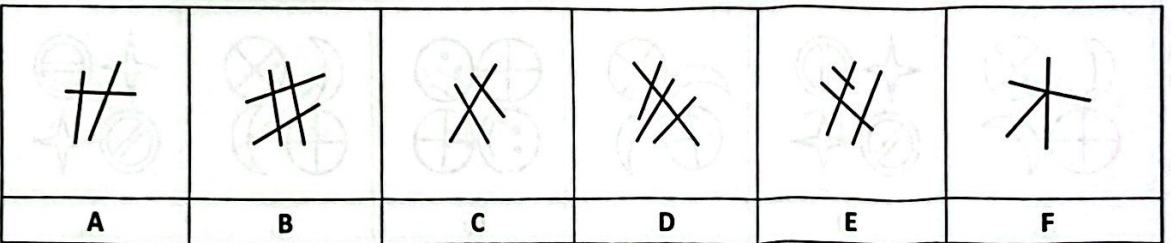
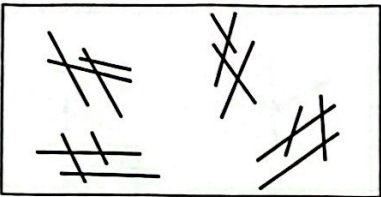
9



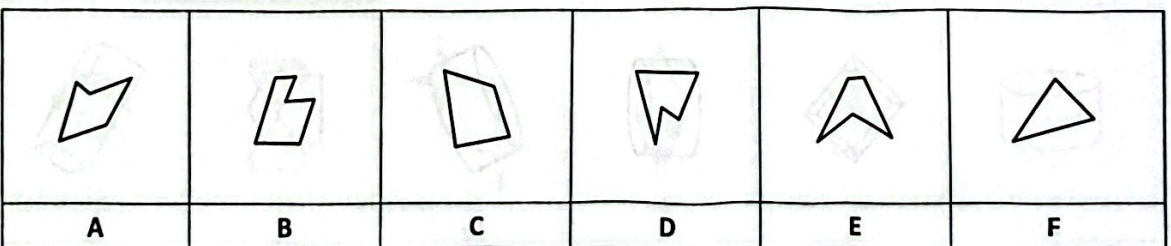
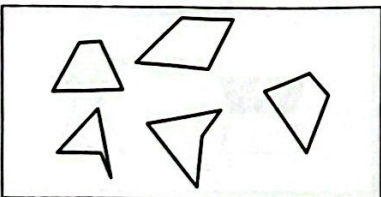
10



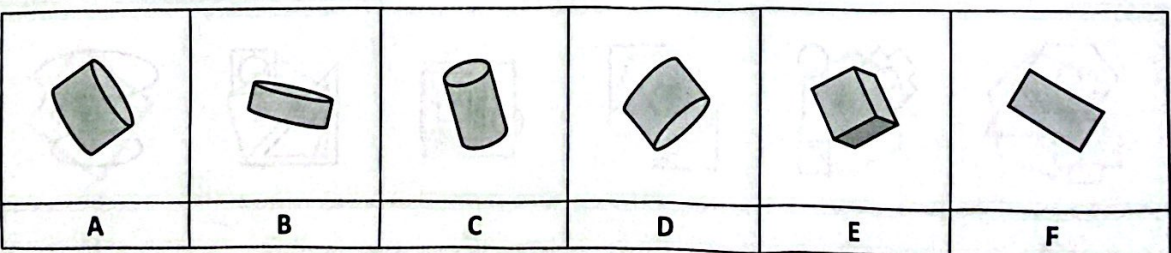
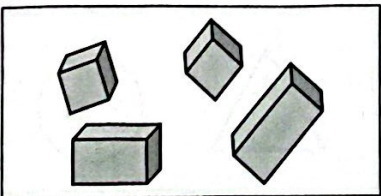
11



12

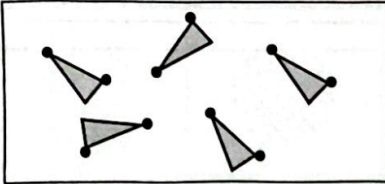


13



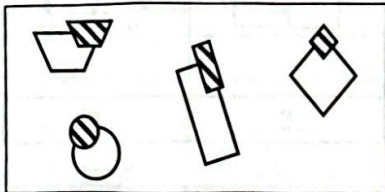


14



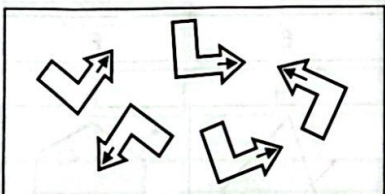
A	B	C	D	E	F

15



A	B	C	D	E	F

16


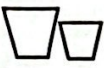
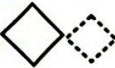


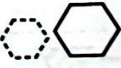


A	B	C	D	E	F


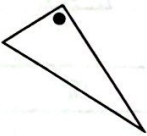
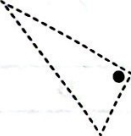

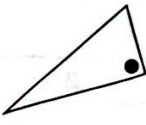

# Differences

Which is the odd one out? Circle one of the options A-F.

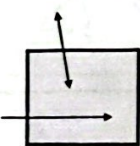

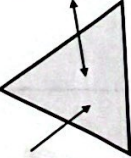
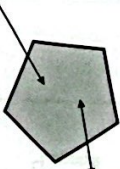
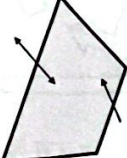
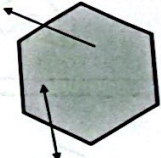
Example

					
A	<b>B</b>	C	D	E	F







1

					
A	B	C	D	E	F







2

					
A	B	C	D	E	F

3

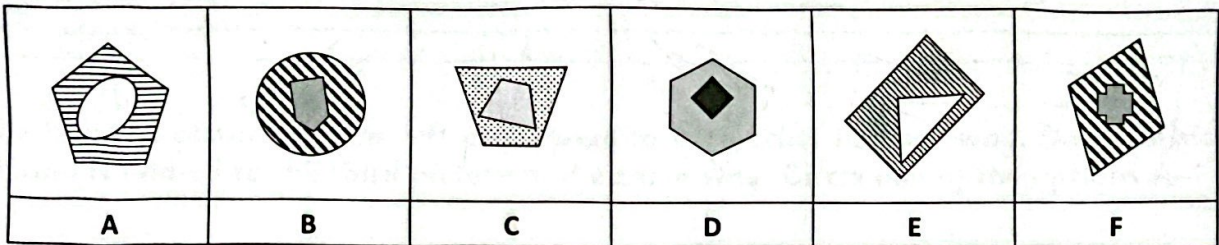
					
A	B	C	D	E	F

4

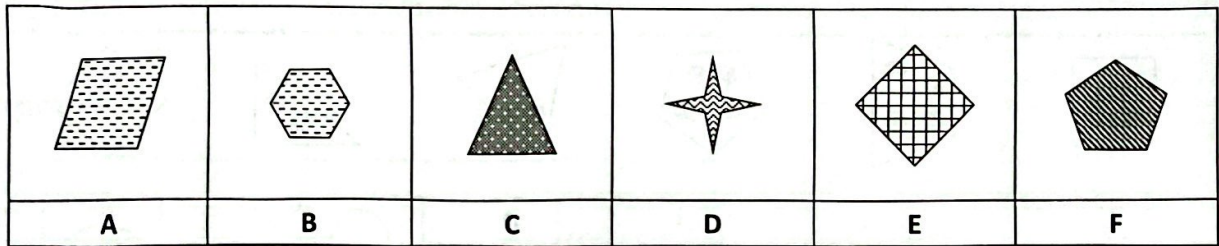
					
A	B	C	D	E	F



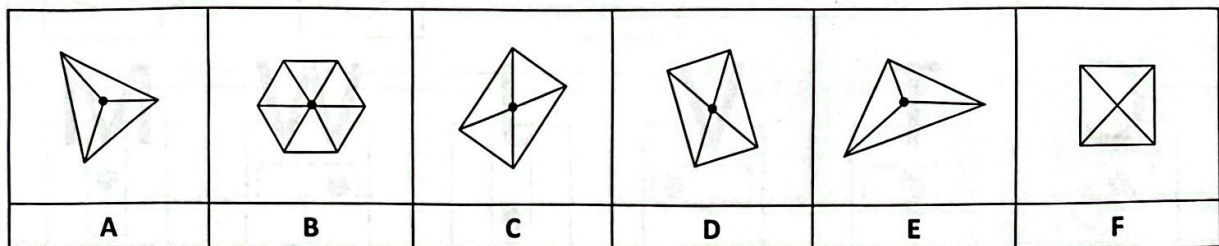
5



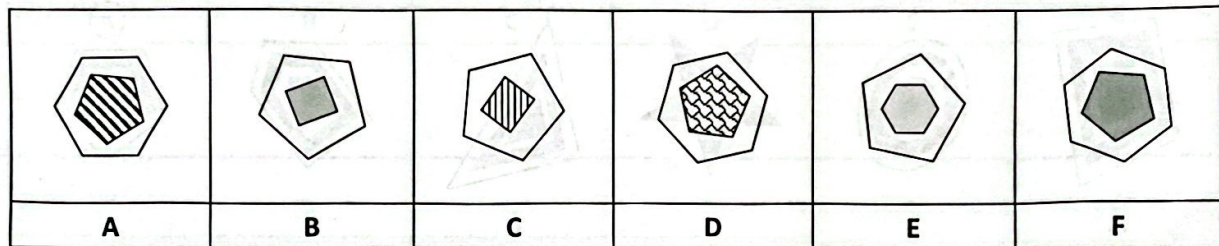
6



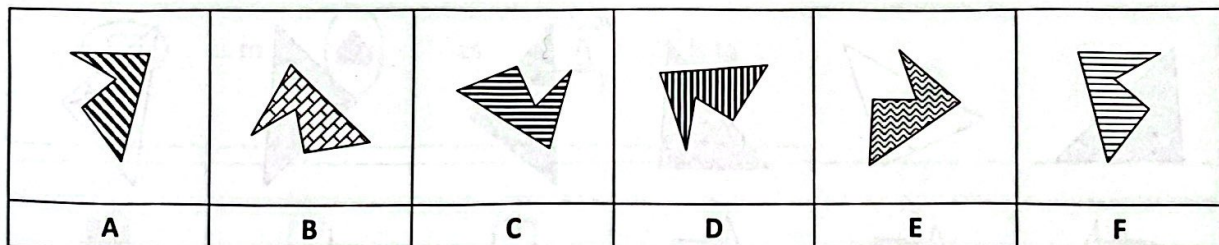
7



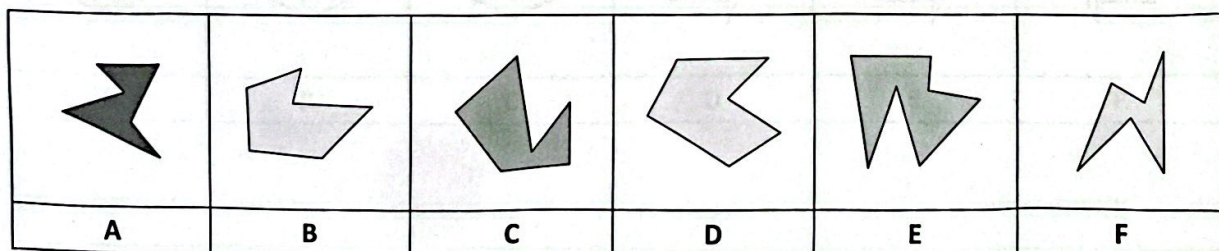
8



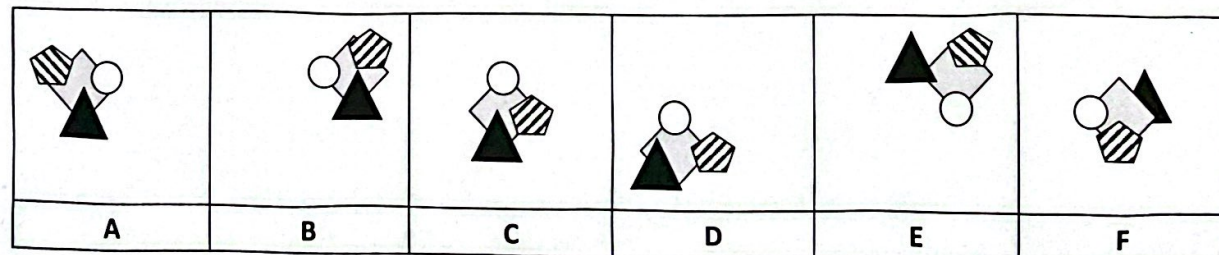
9



10

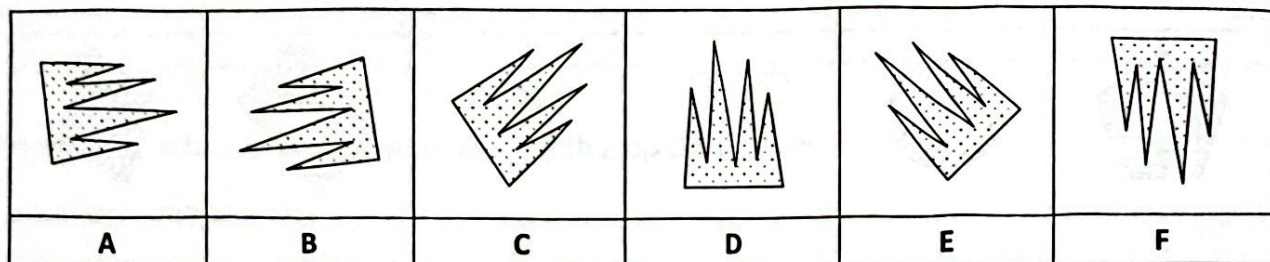


11

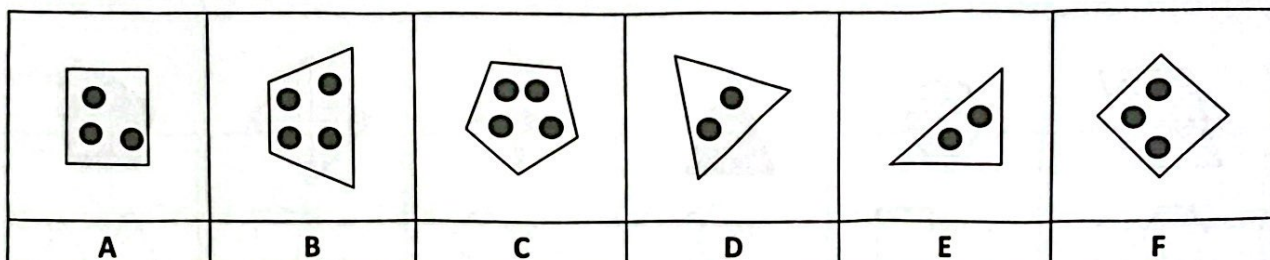




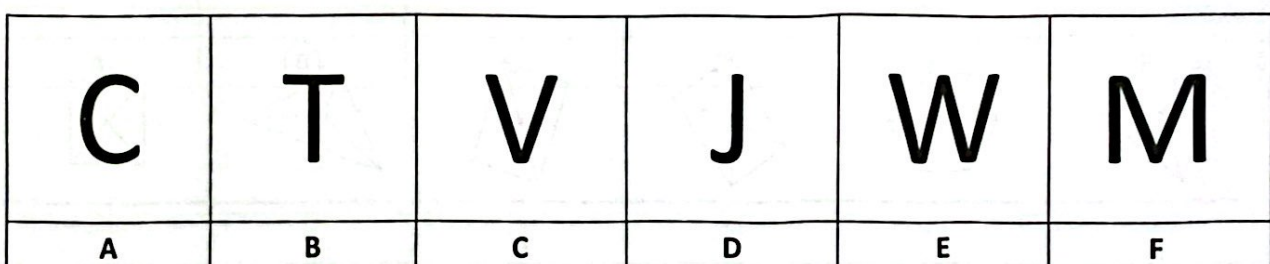
12



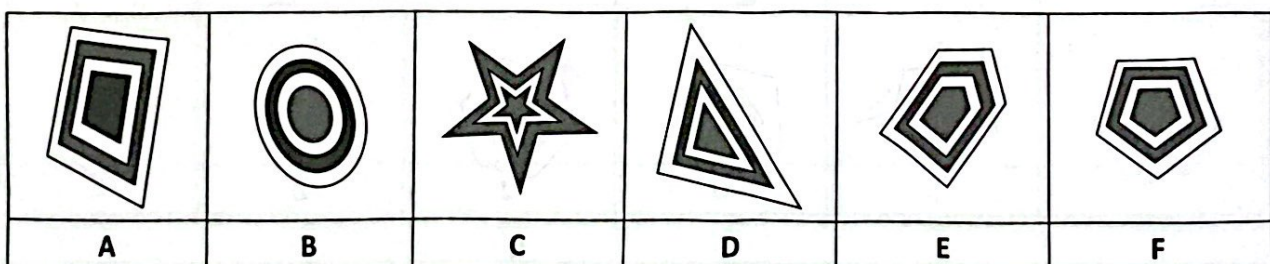
13



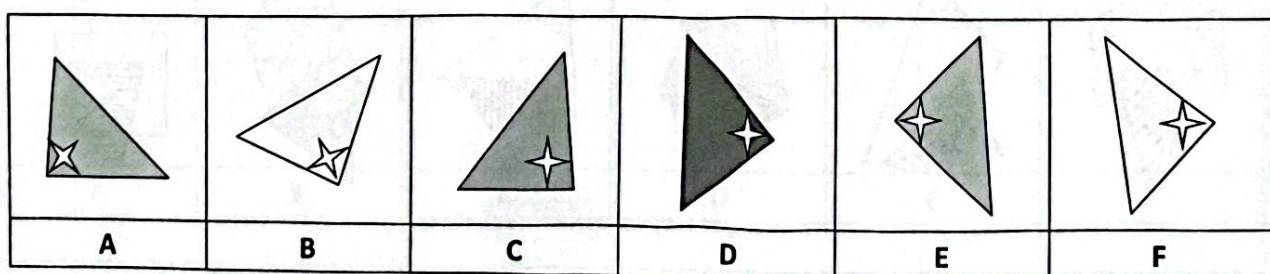
14



15



16

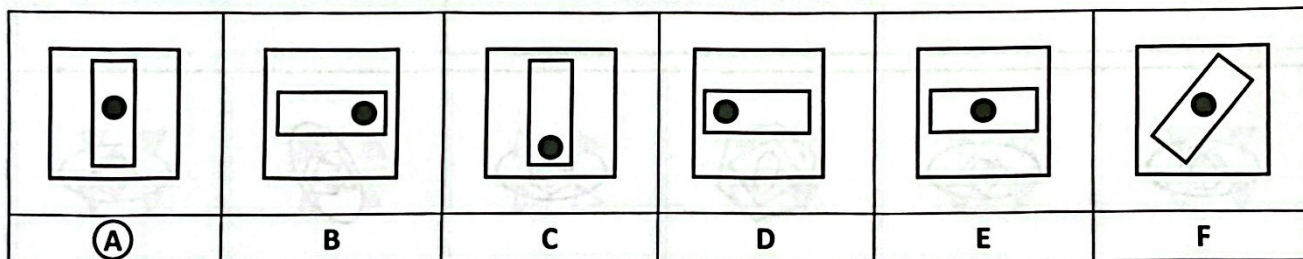
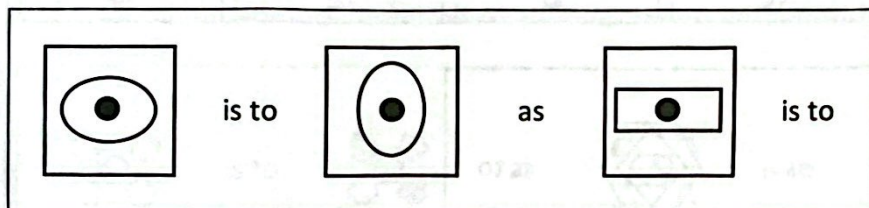




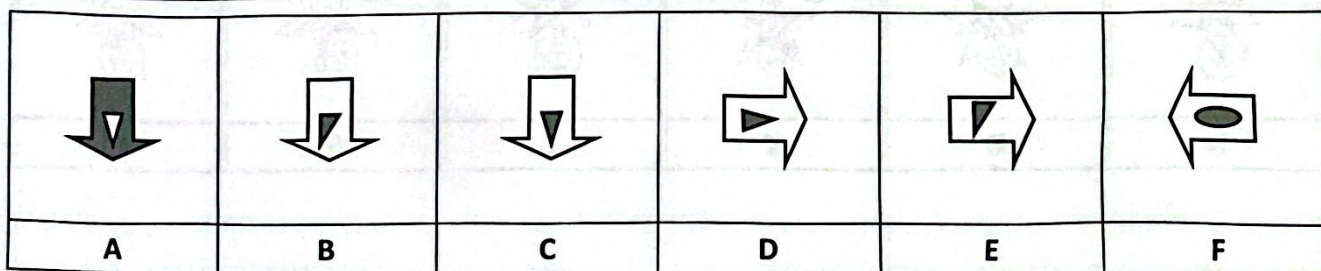
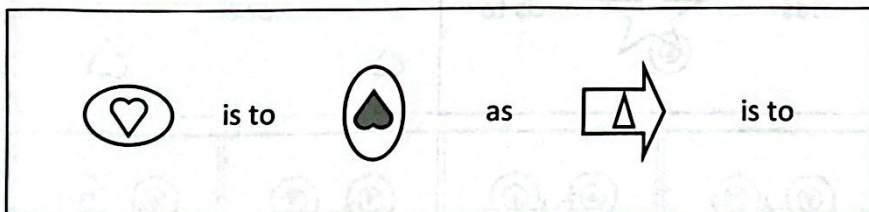
## Analogy

**The first two pictures on the left are related to each other in some way. Decide which picture is related to the third picture in the same way. Circle one of the options A–F.**

### Example



1



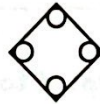
2



is to



as



is to



A



B



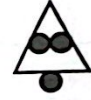
C



D



E



F

3



is to



as



is to



A



B



C



D



E



F

4



is to



as



is to



A



B



C



D



E



F

5



is to



as



is to



A



B



C



D



E



F



6



is to



as



is to



A



B



C



D



E



F

7



is to



as



is to



A



B



C



D



E



F

8



is to



as



is to



A



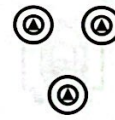
B



C



D



E



F

9



is to



as



is to



A



B



C



D



E



F

10



is to



as



is to



A



B



C



D

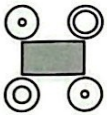


E

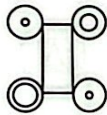


F

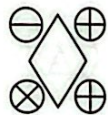
11



is to



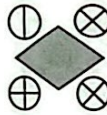
as



is to



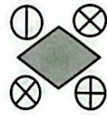
A



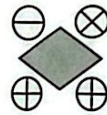
B



C



D



E



F

12



is to



as



is to



A



B



C



D



E



F

13



is to



as



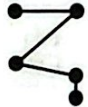
is to



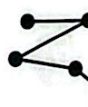
A



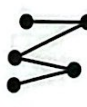
B



C



D



E



F



14



is to



as



is to



A



B



C



D



E

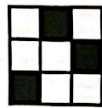


F

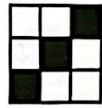
15



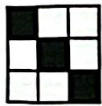
is to



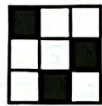
as



is to



A



B



C



D



E



F

16



is to



as



is to



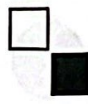
A



B



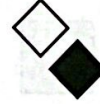
C



D



E



F

# Sequences

Complete the sequence. Circle one of the options A-F.

Example

			?	
--	--	--	---	--

A	B	C	D	<b>E</b>	F

1

?				
---	--	--	--	--

A	B	C	D	E	F

2

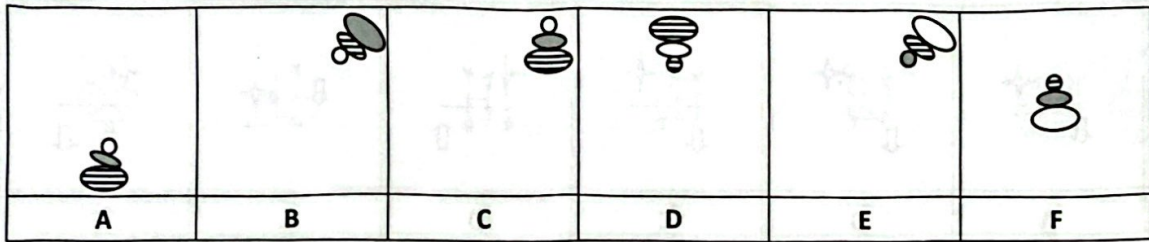
			?		

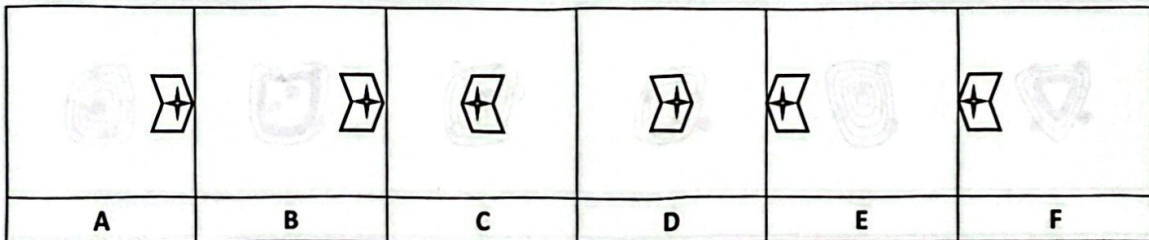
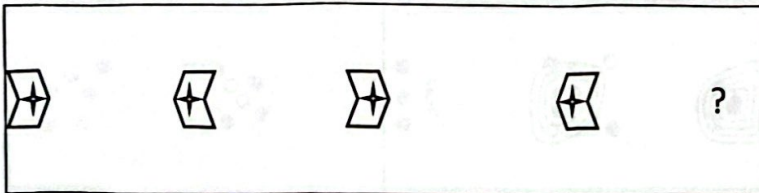
A	B	C	D	E	F



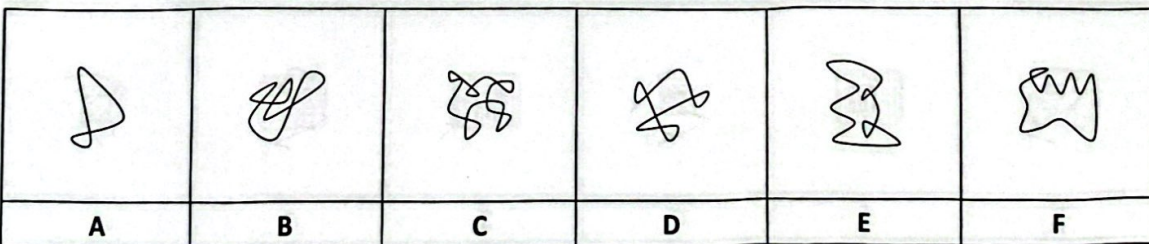
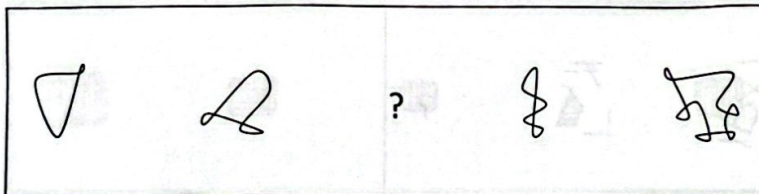
3



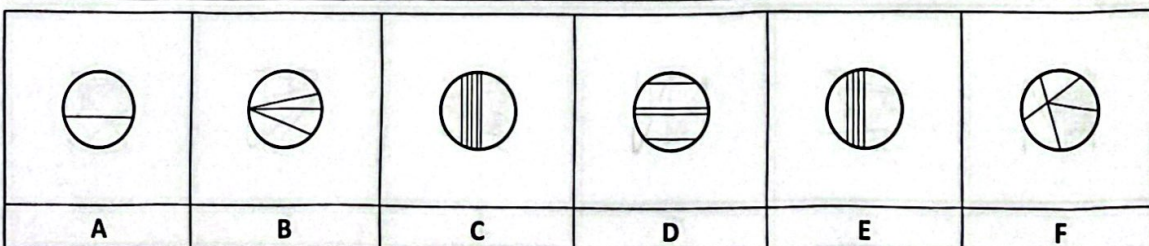
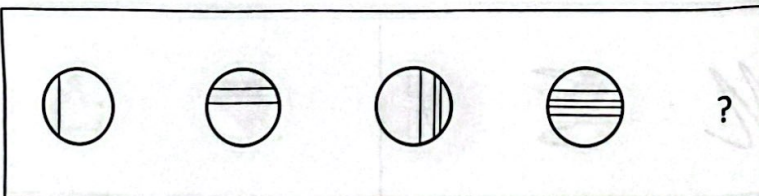
4



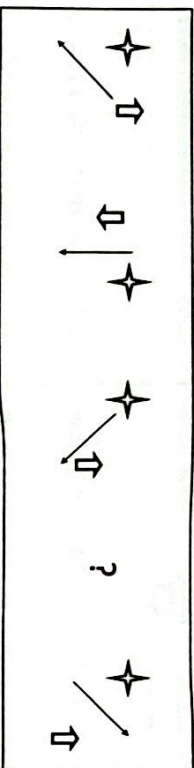
5



6

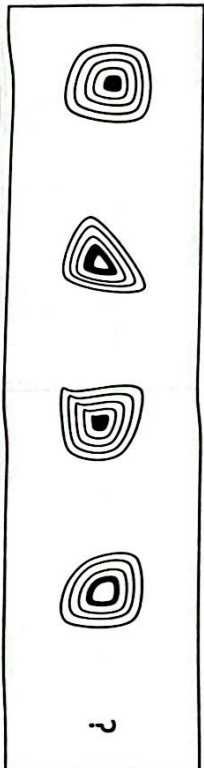


7



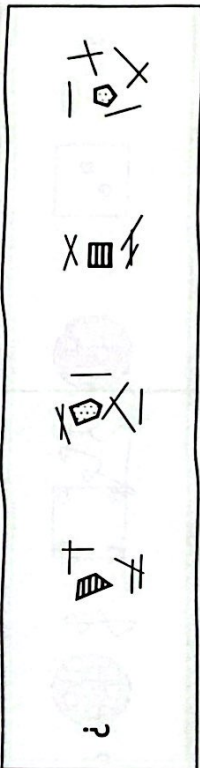
A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

8



A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

9



A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

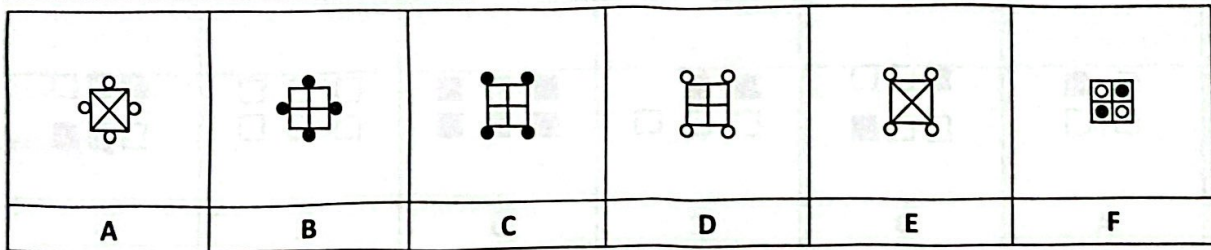
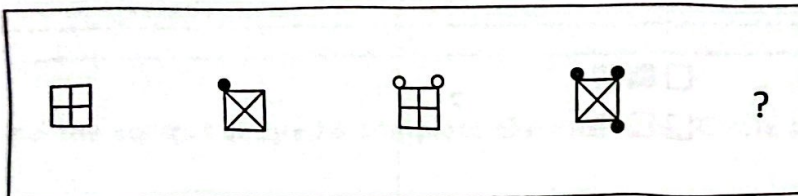
10



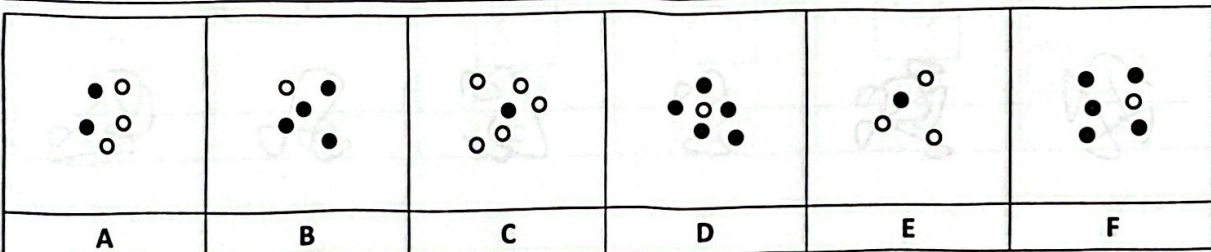
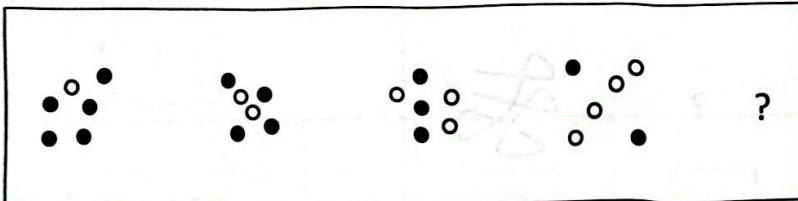
A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--



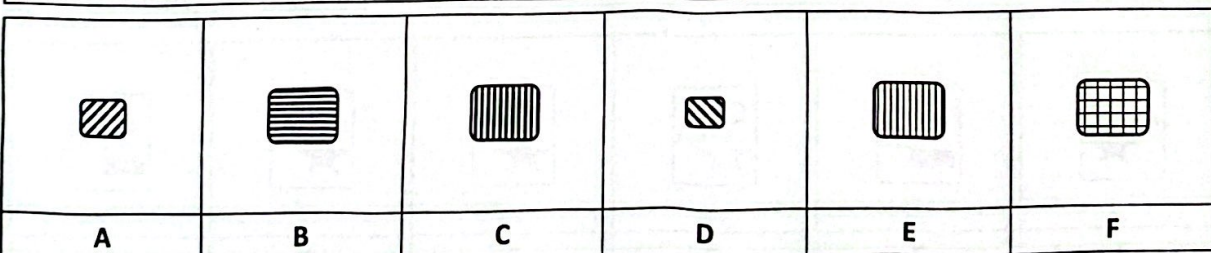
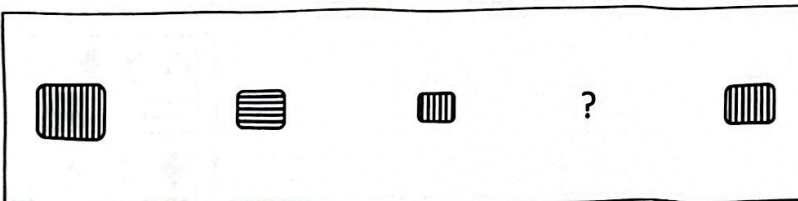
11



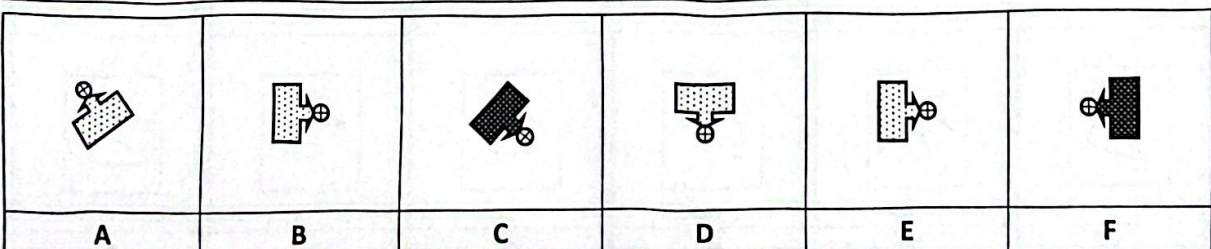
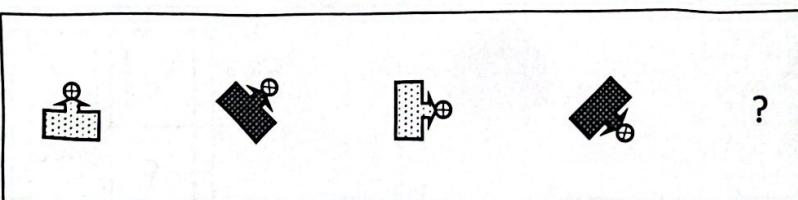
12



13



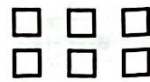
14



15



?



A

B

C

D

E

F

16



?



A

B

C

D

E

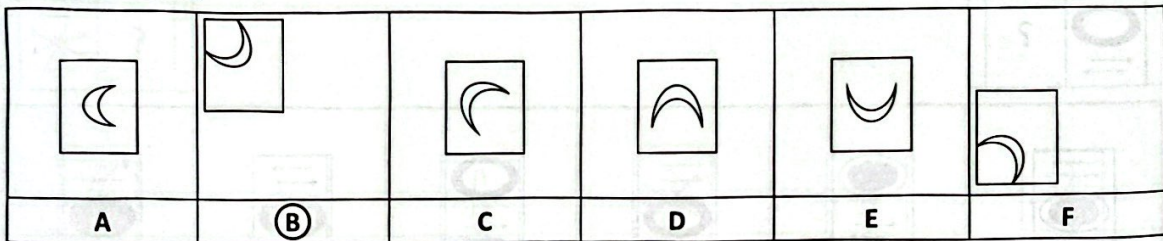
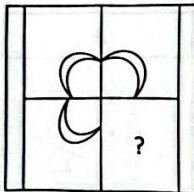
F



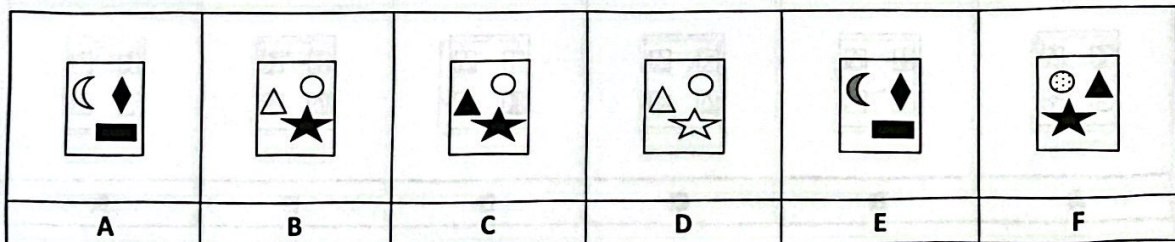
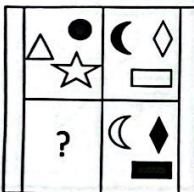
# Grids

Find the correct shape to complete the matrices. Circle one of the options A–F.

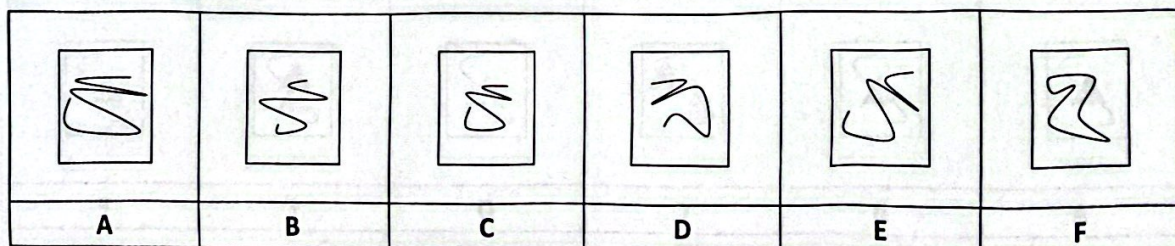
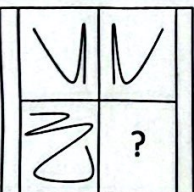
Example



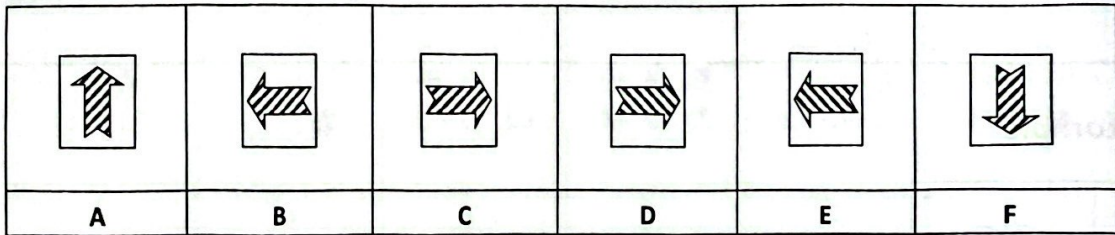
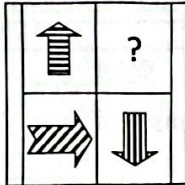
1



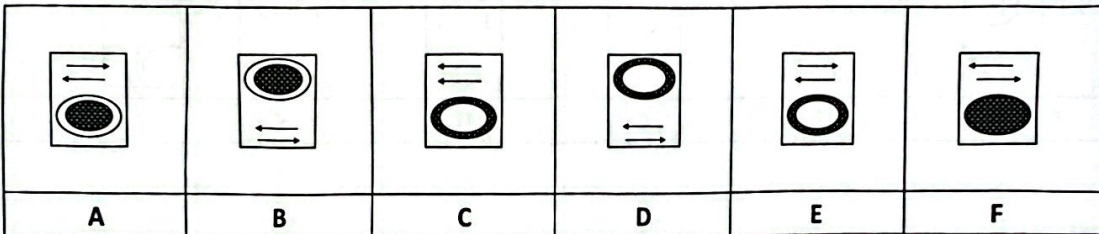
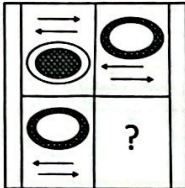
2



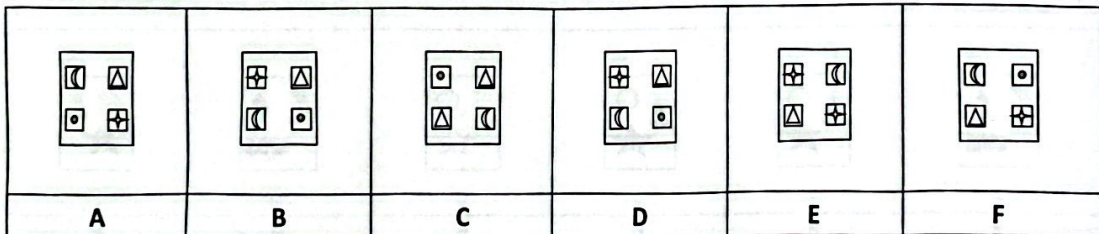
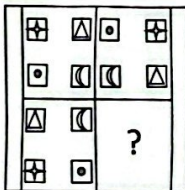
3



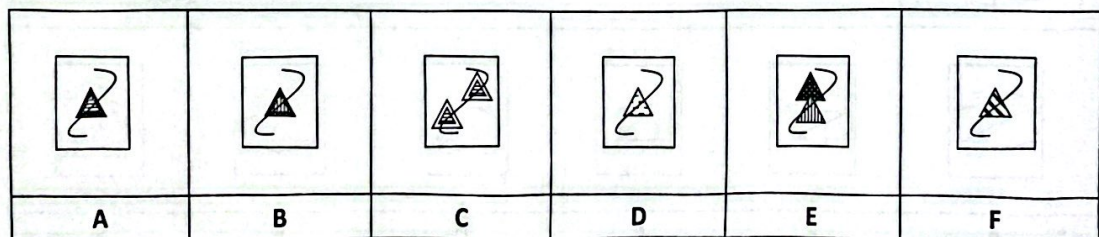
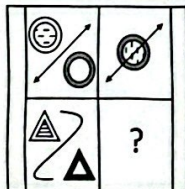
4



5

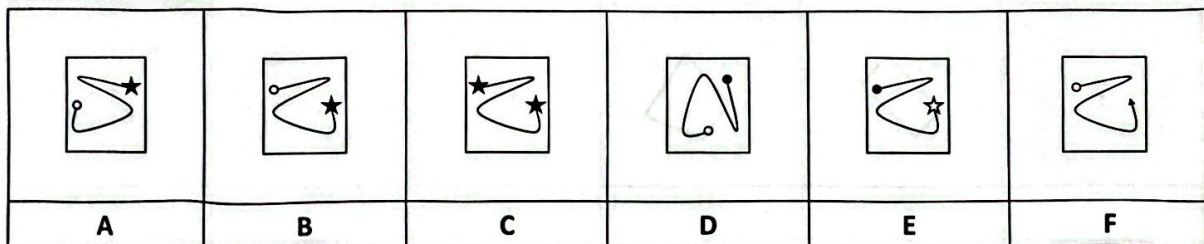
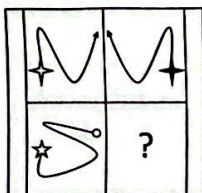


6

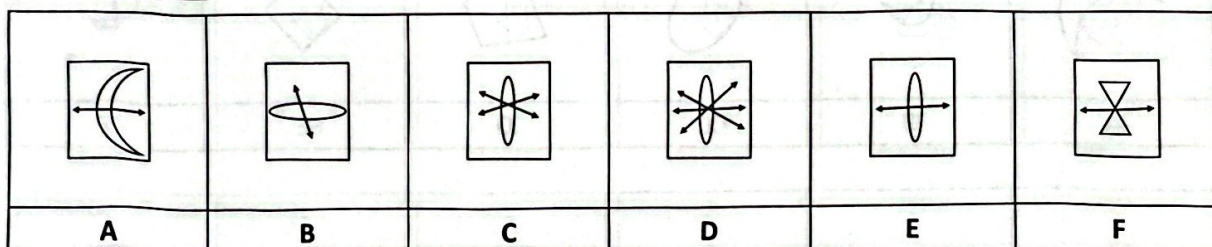
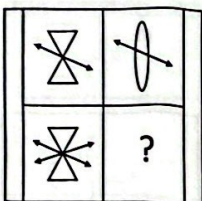




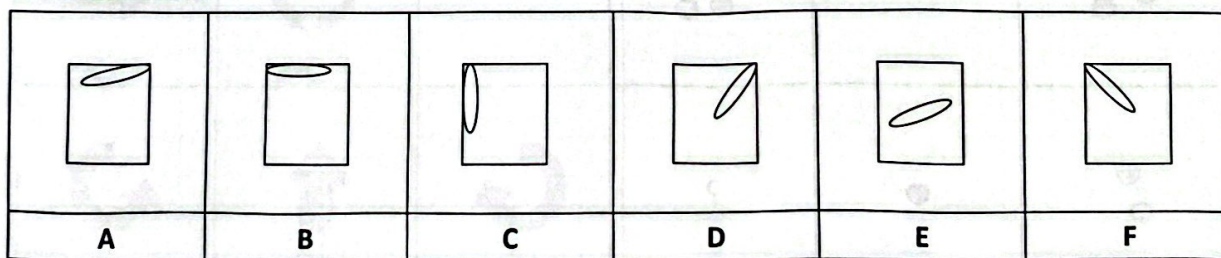
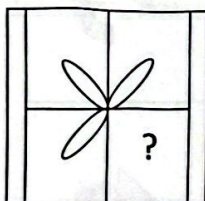
7



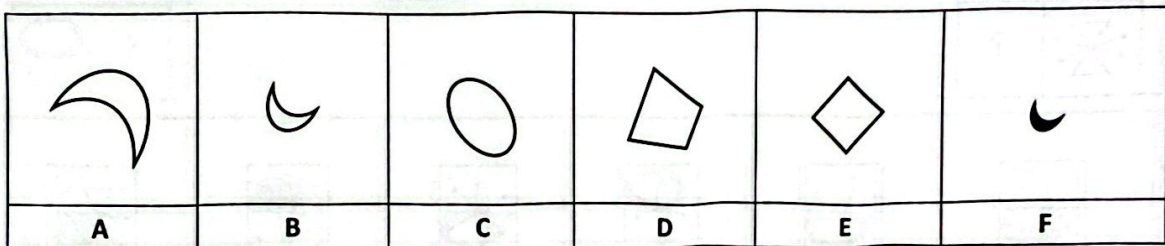
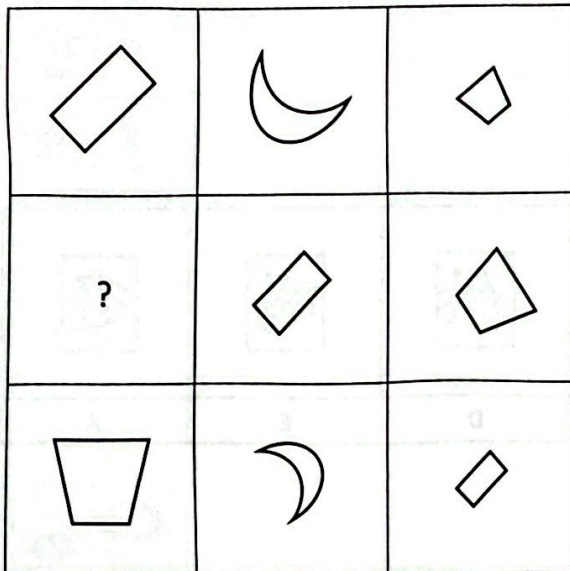
8



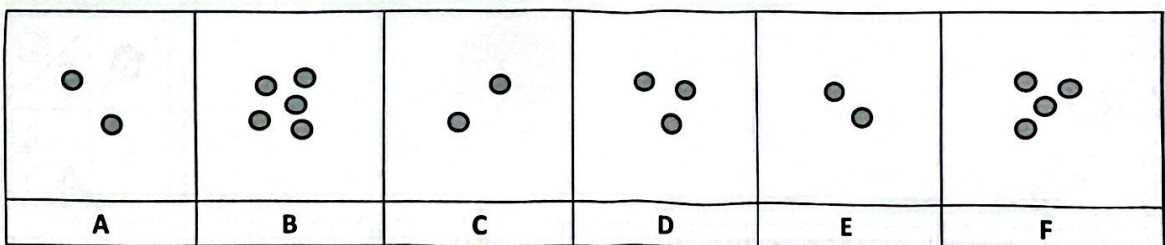
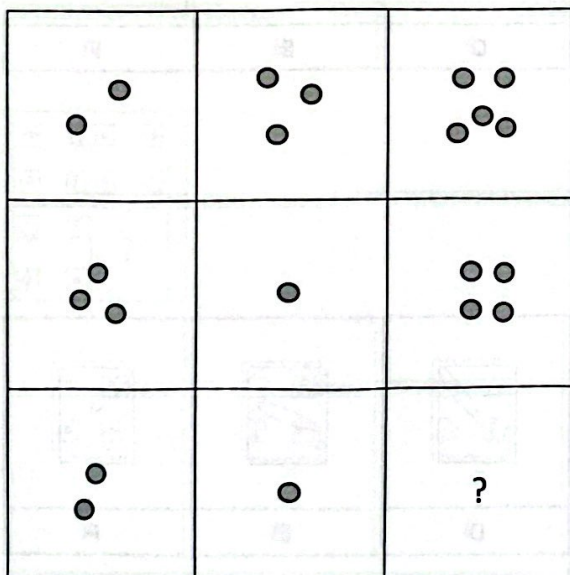
9



10

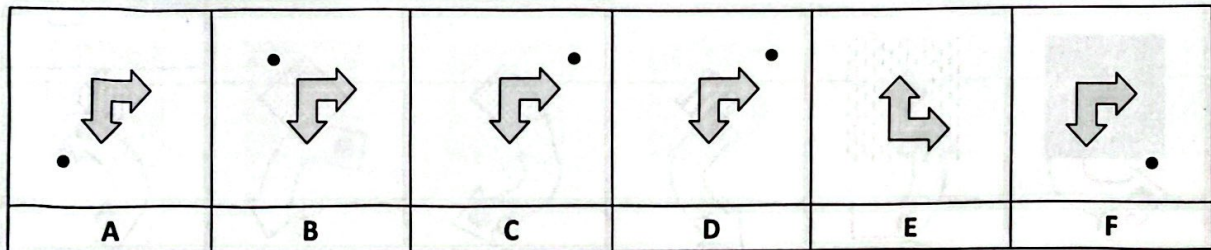
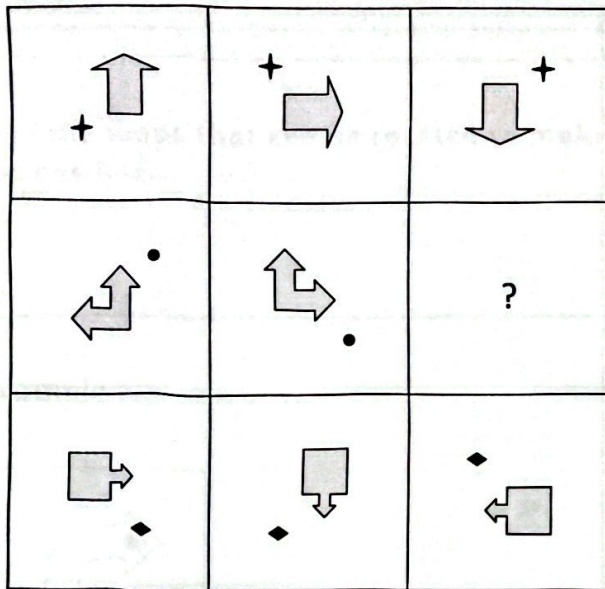


11

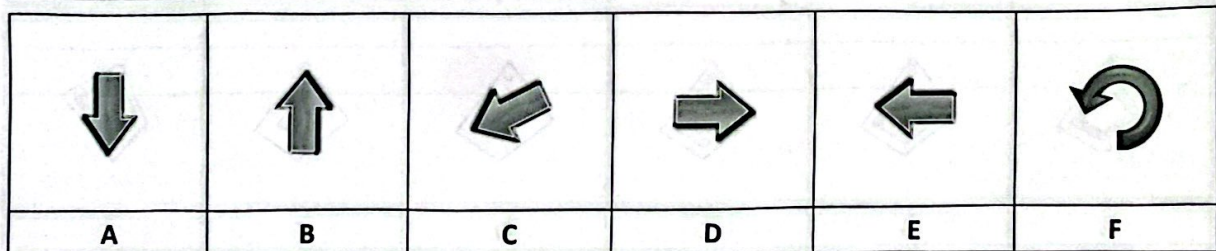
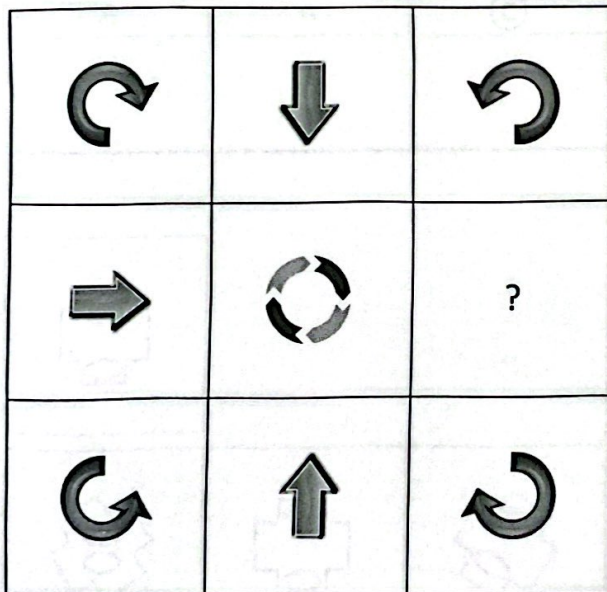




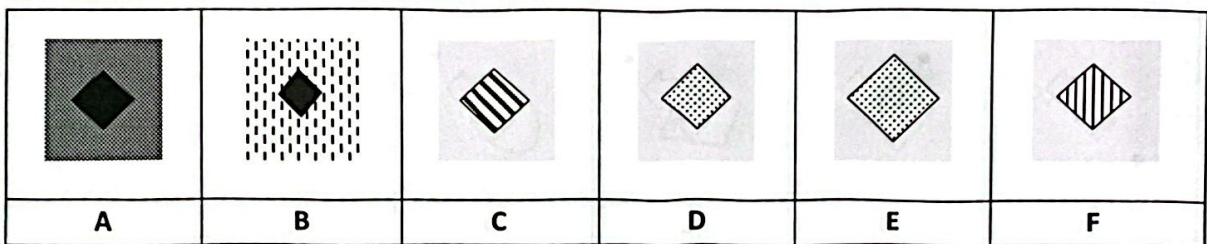
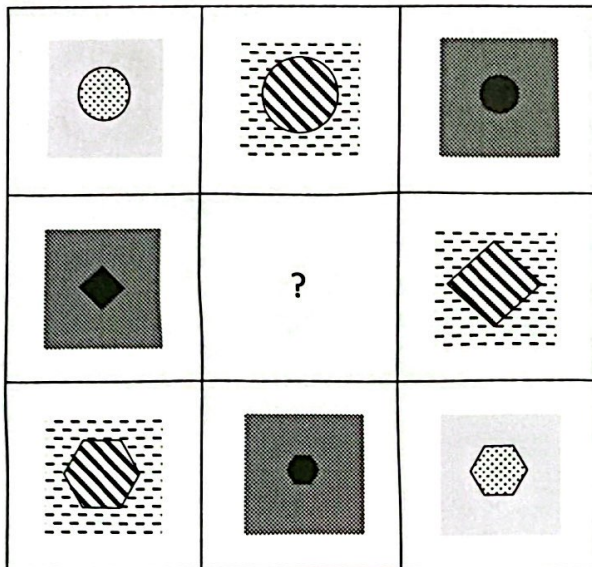
12



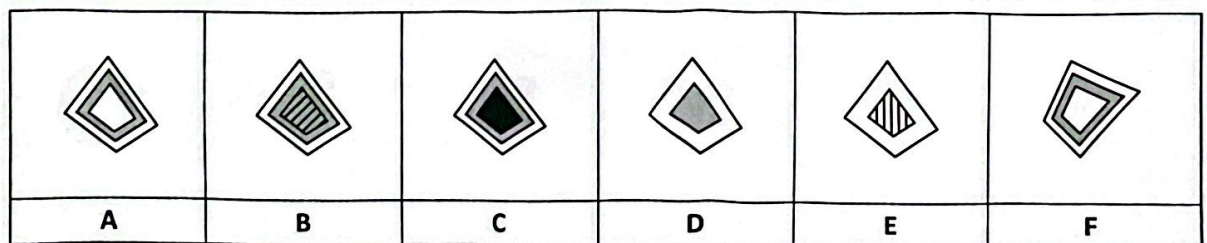
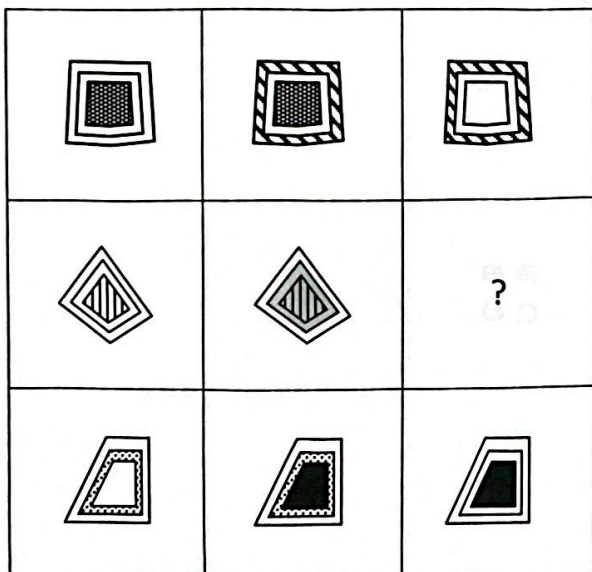
13



14



15

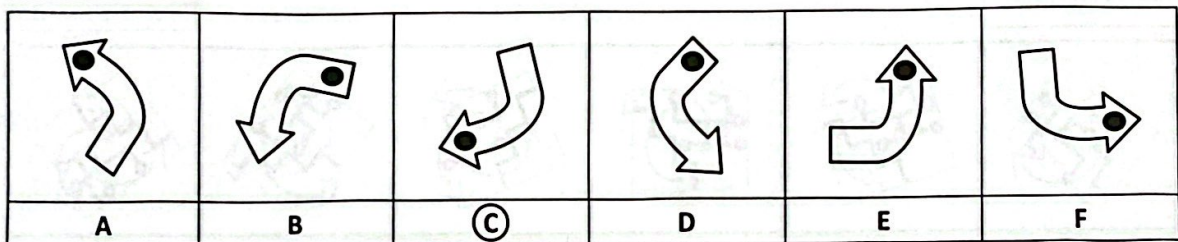
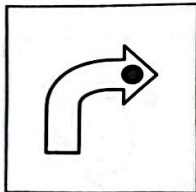




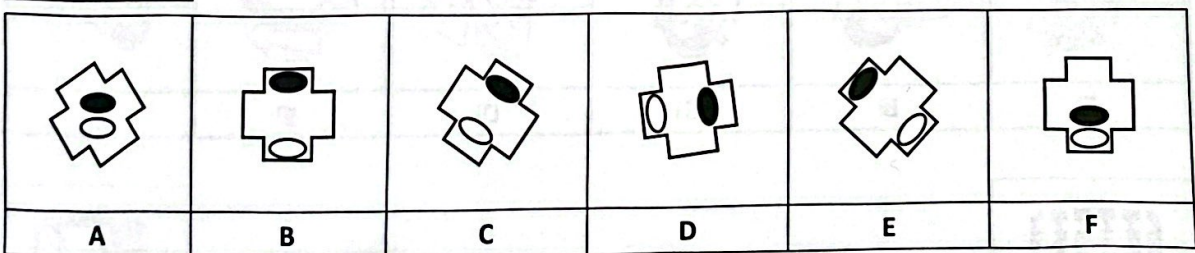
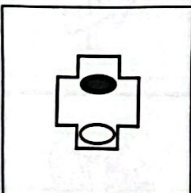
# Rotations

Find the shape that can be rotated to make the top figure on the left. Circle one of the options A–F.

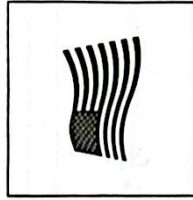
Example



1

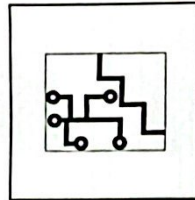


2



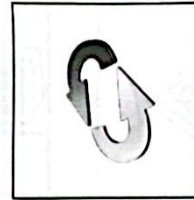
A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

3



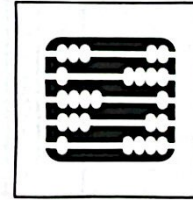
A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

4



A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

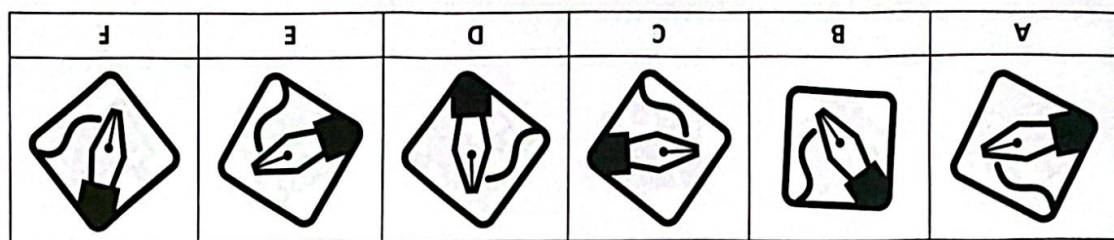
5



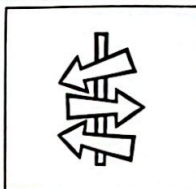
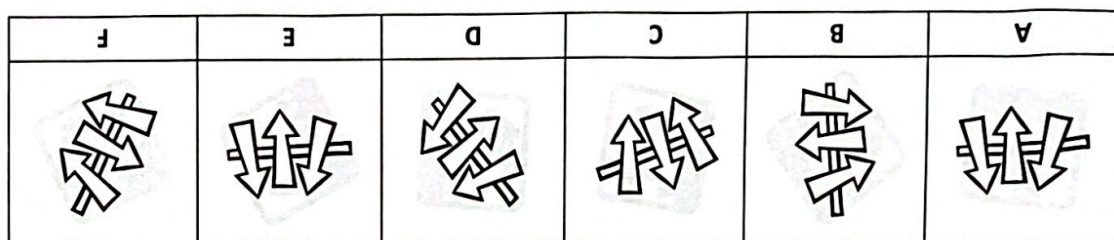
A		B		C		D		E		F	
---	--	---	--	---	--	---	--	---	--	---	--

30

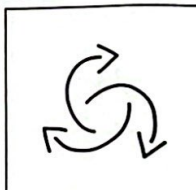
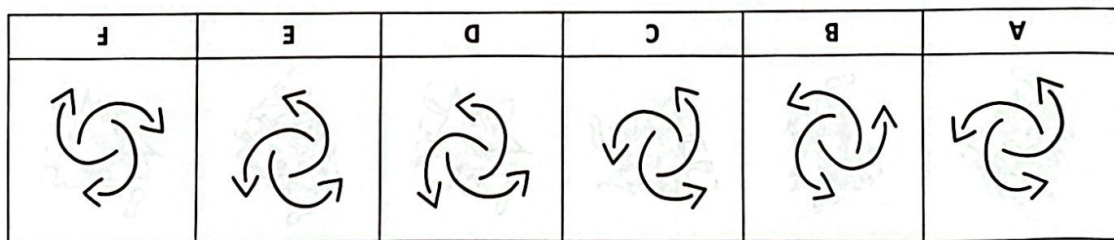




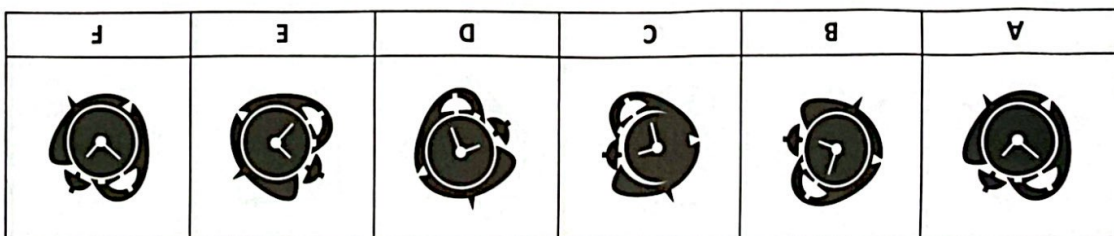
6



8

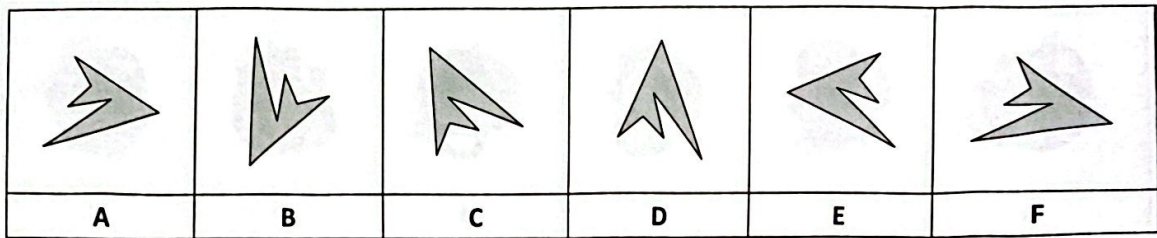
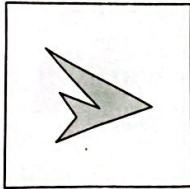


7

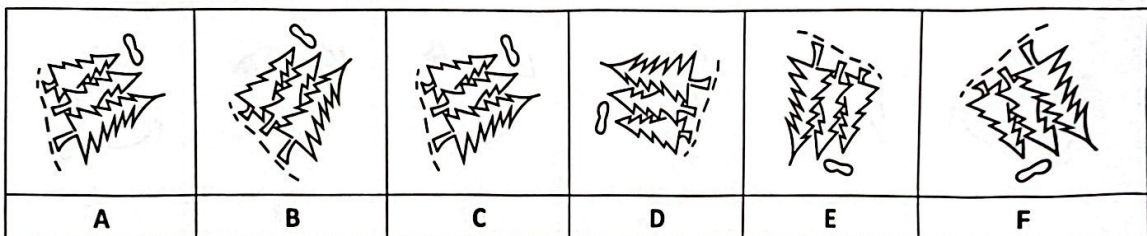


9

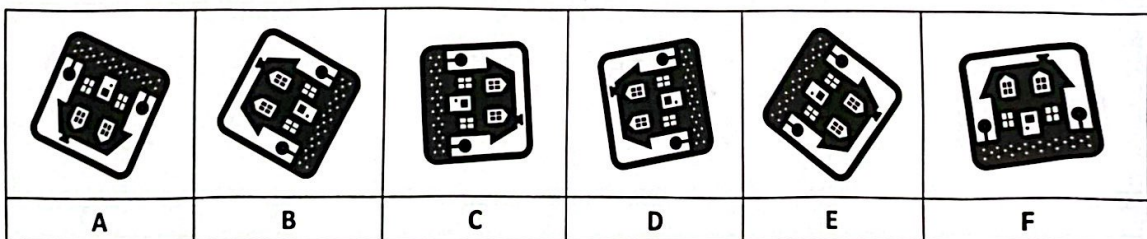
10



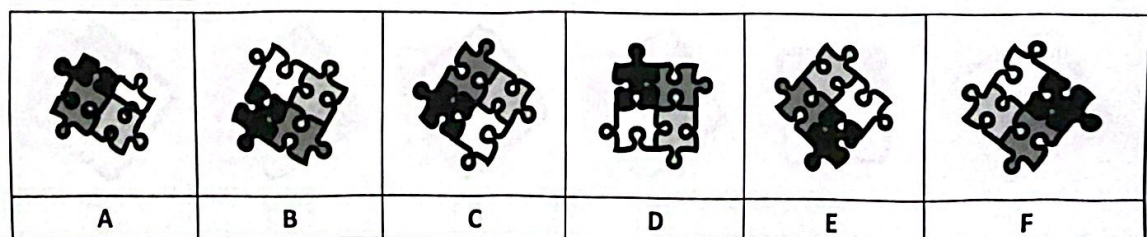
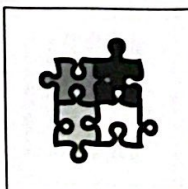
11



12

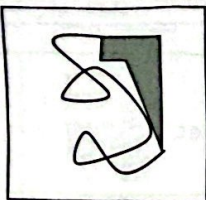


13





14



A	B	C	D	E	F

15

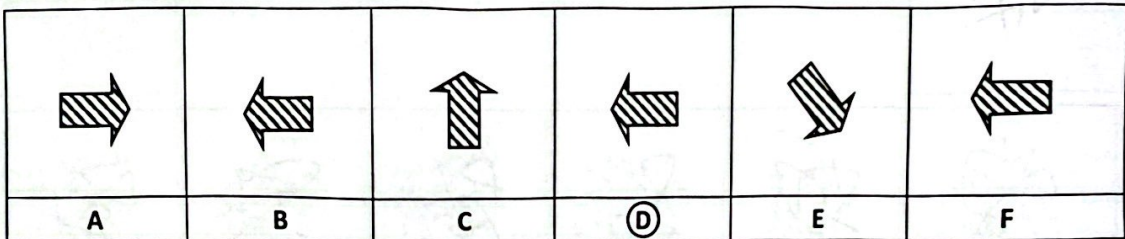
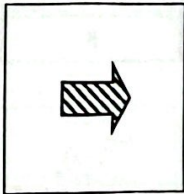


A	B	C	D	E	F

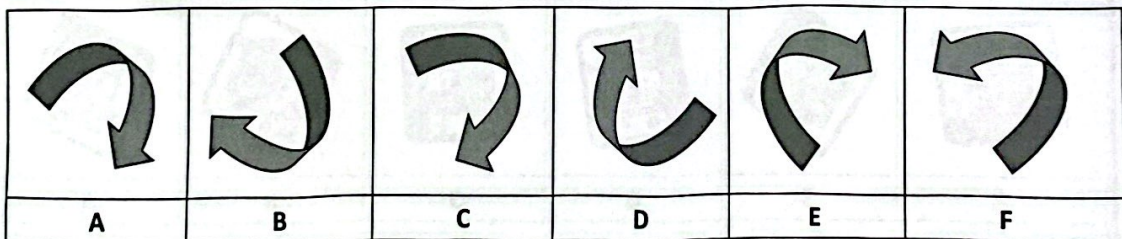
# Reflections

Find the shape that is formed when the shape in the top-left box is reflected horizontally. Circle one of the options A–F.

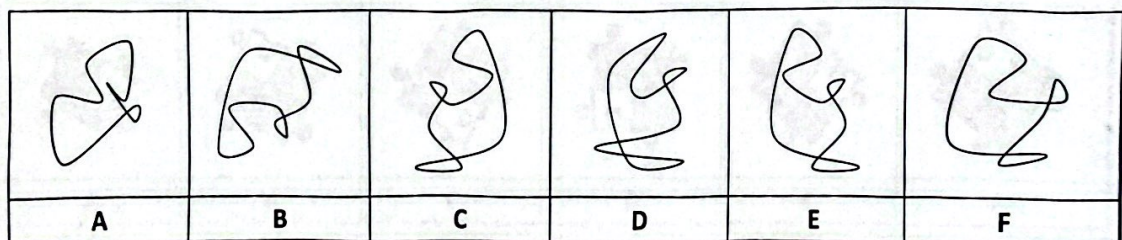
Example



1

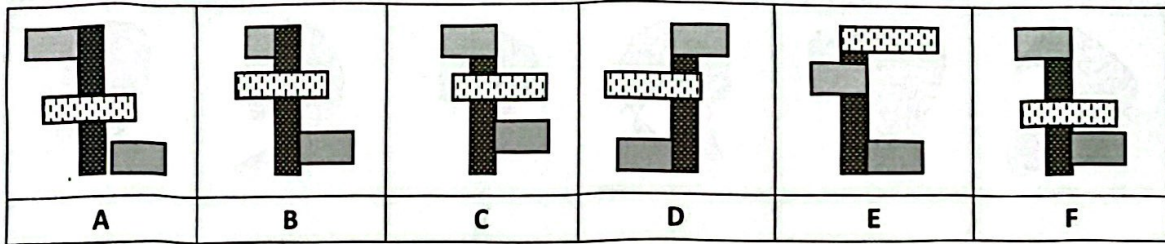
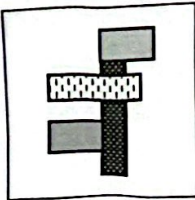


2

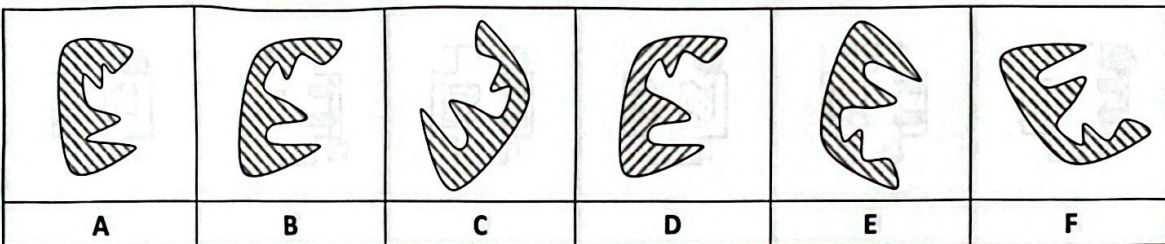
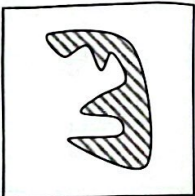




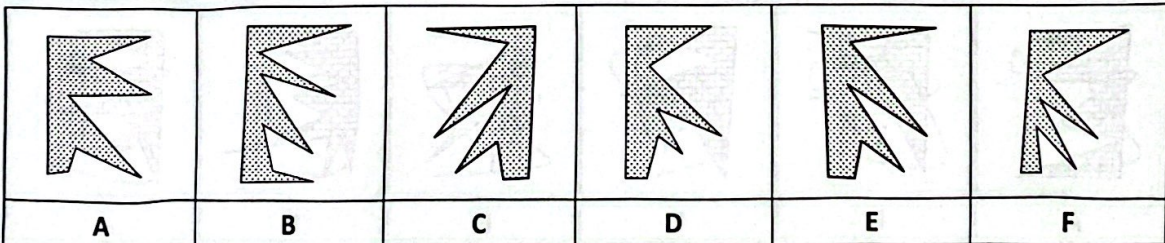
3



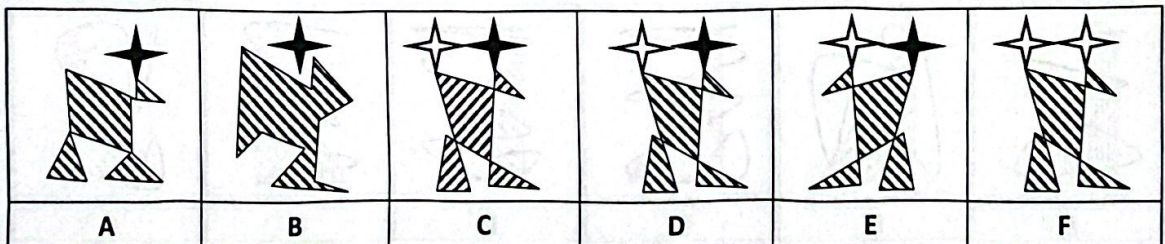
4



5

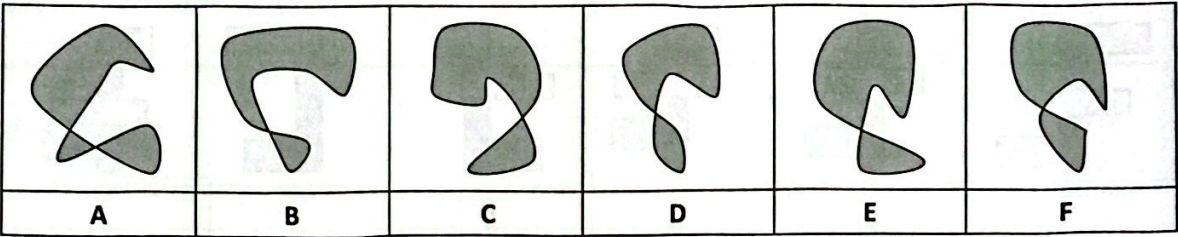
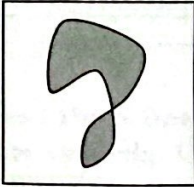


6

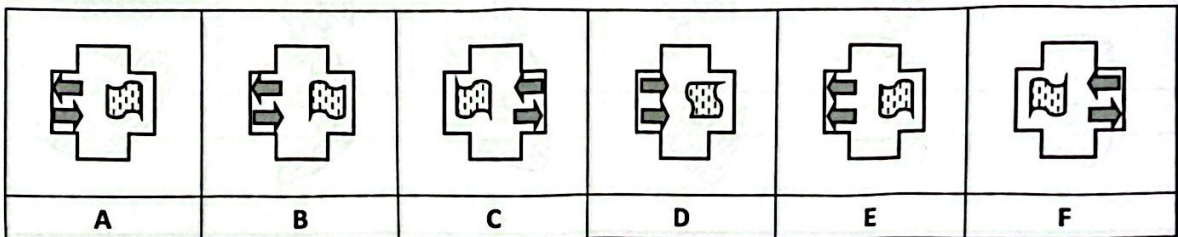
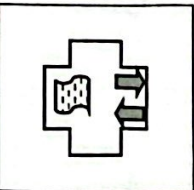




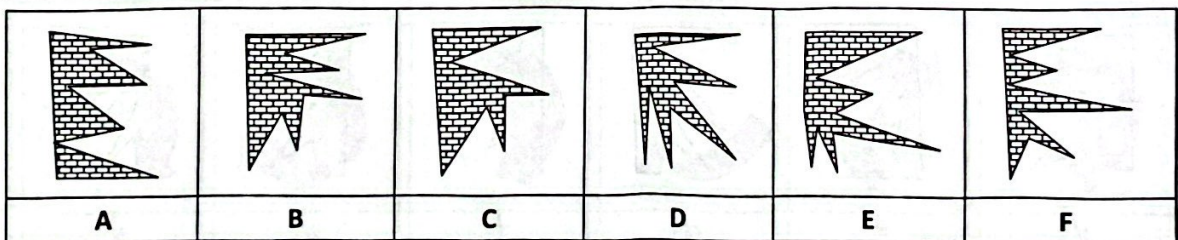
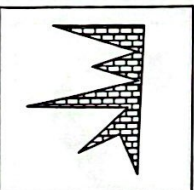
7



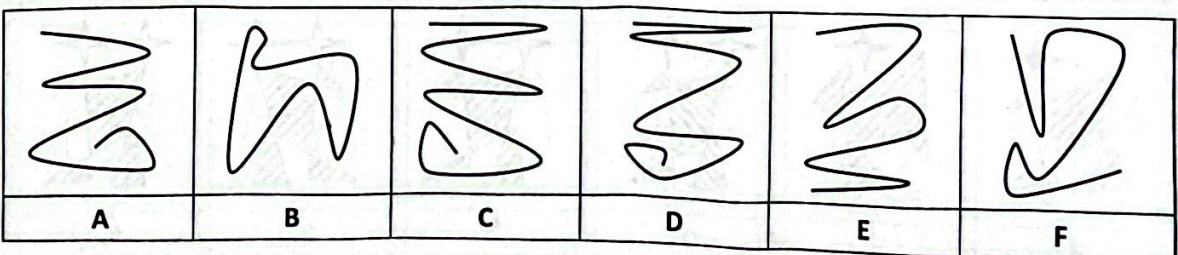
8



9

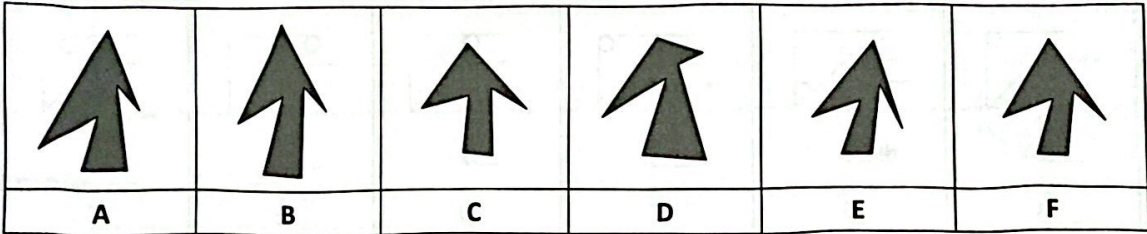
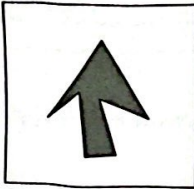


10

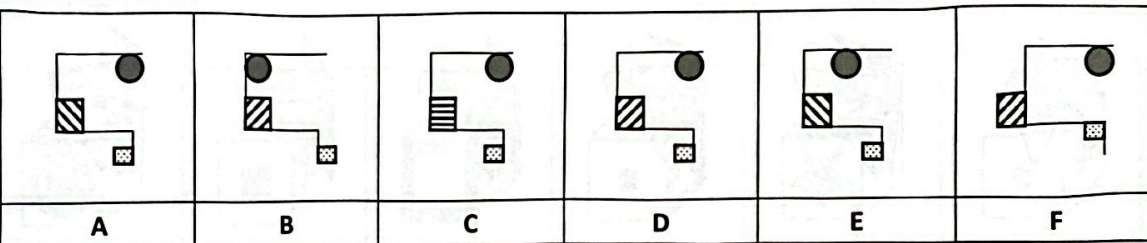
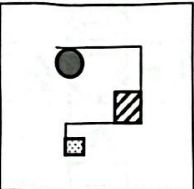




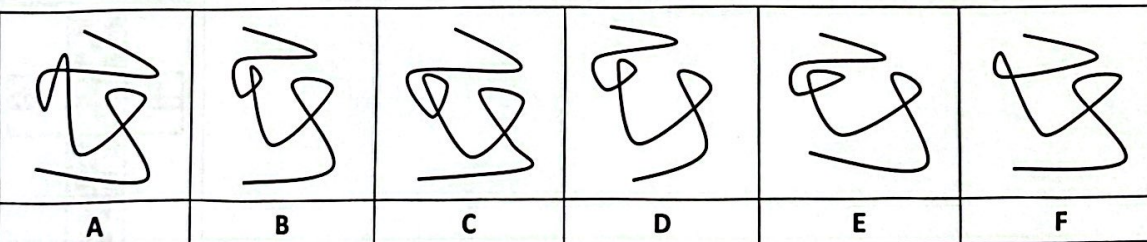
11



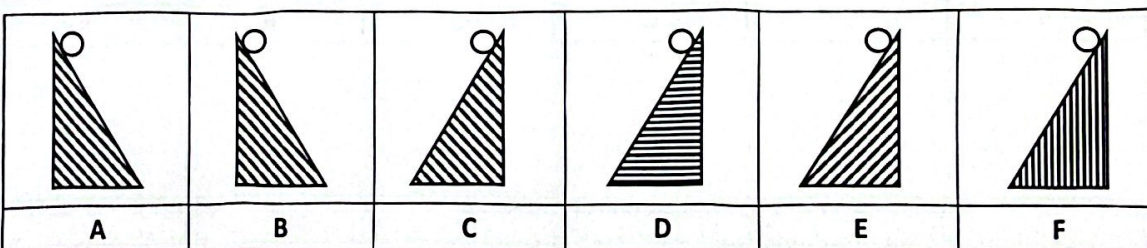
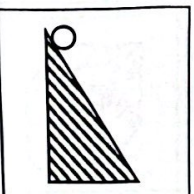
12



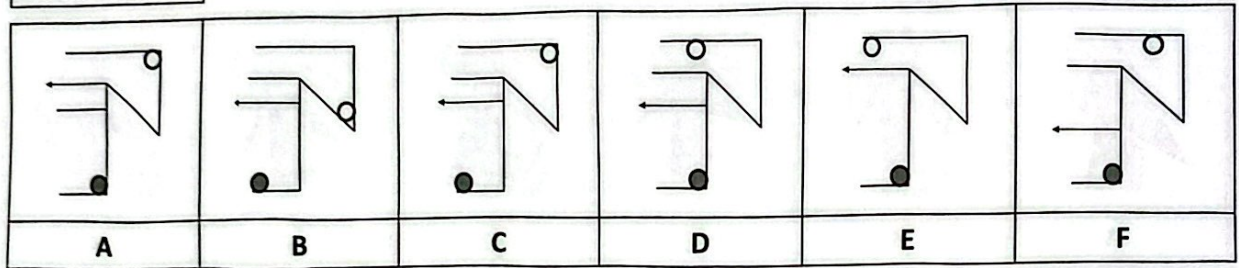
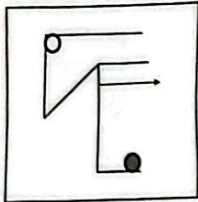
13



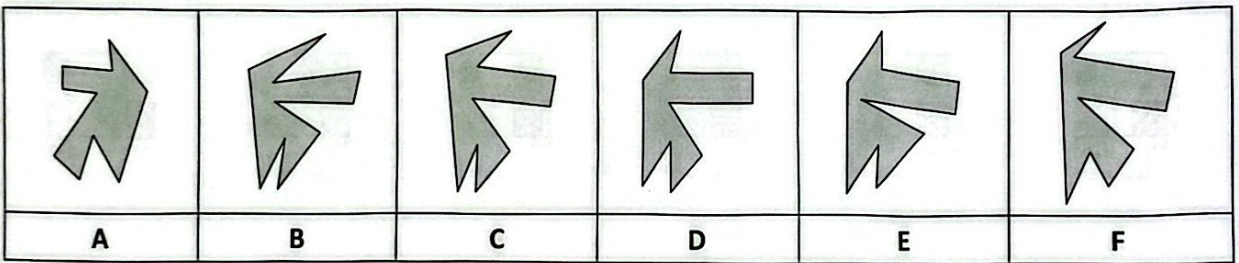
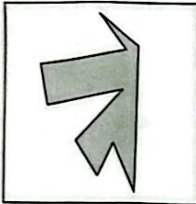
14



15



16

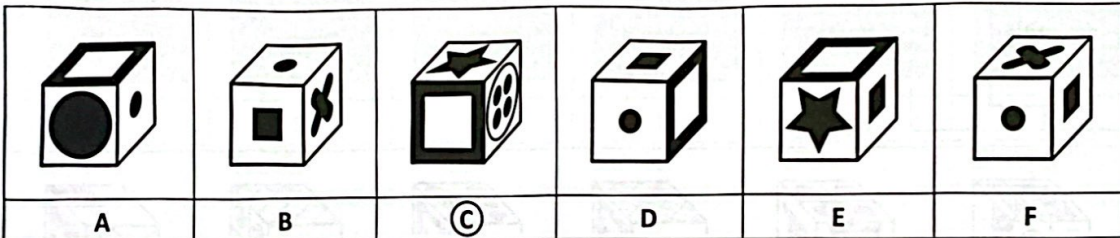
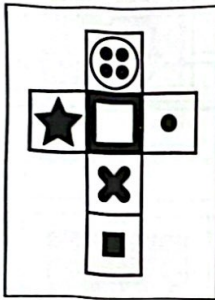




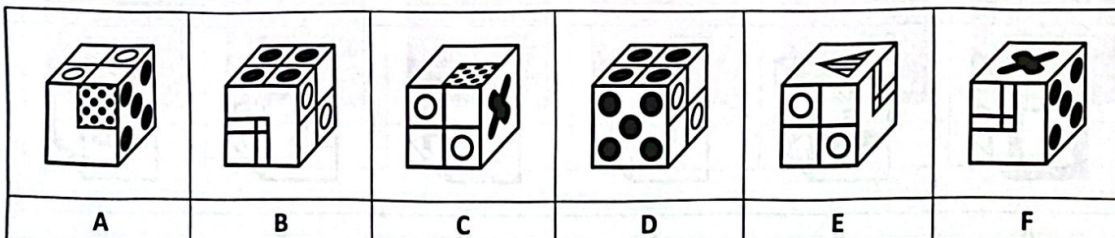
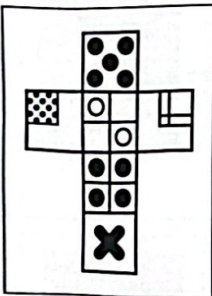
# 3D and Spatial Reasoning

Which cube matches the net? Circle one of the options A–F.

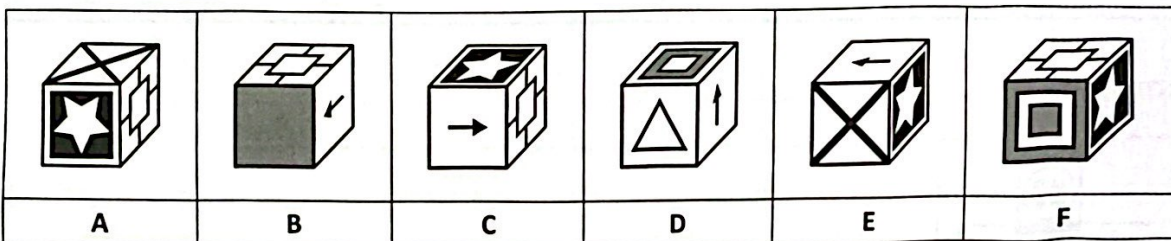
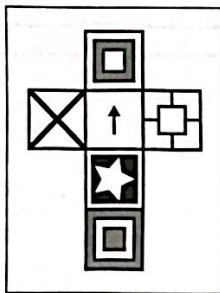
Example



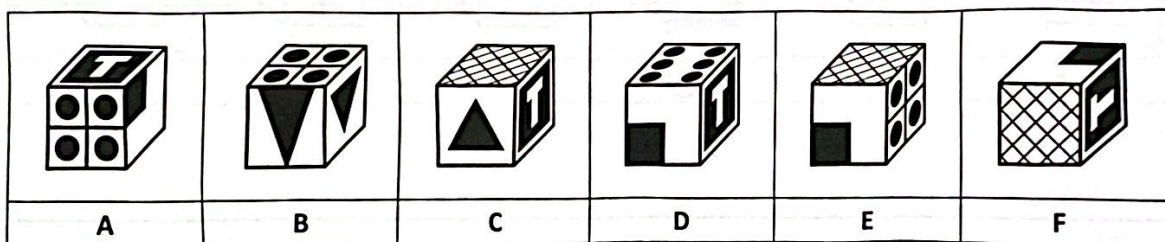
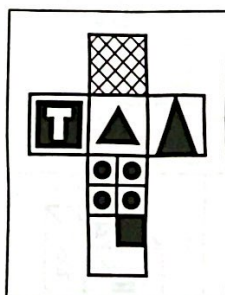
1



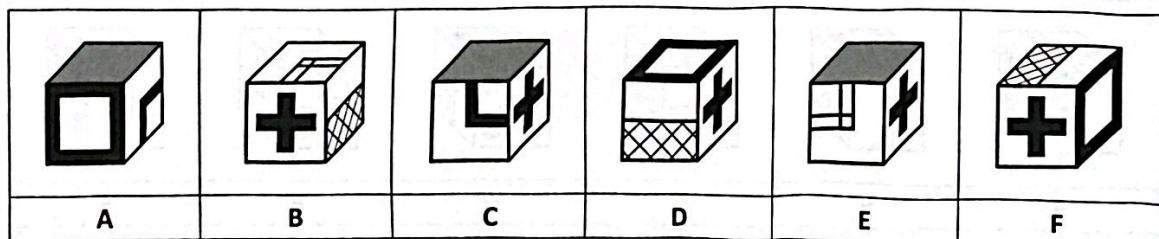
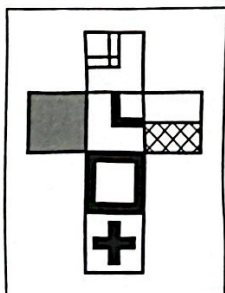
2



3



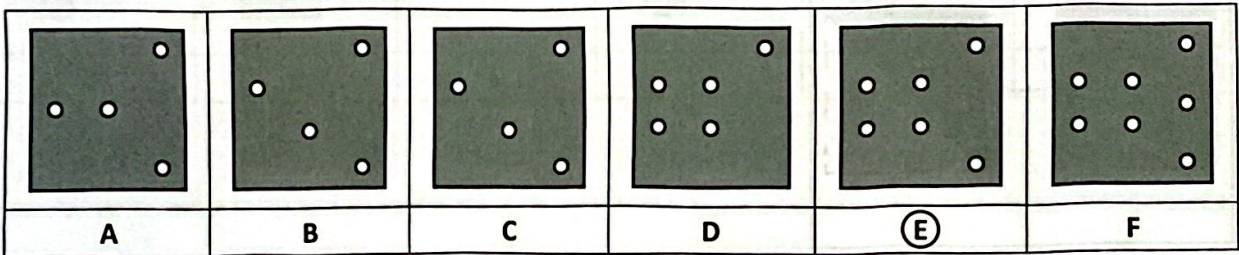
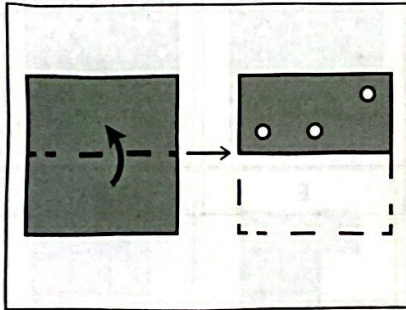
4



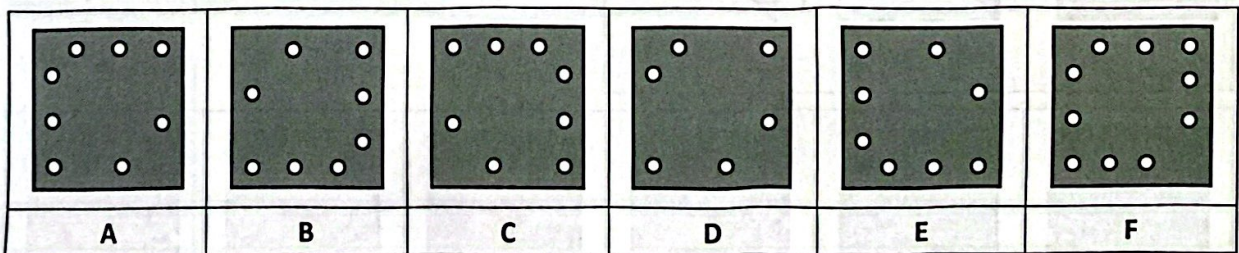
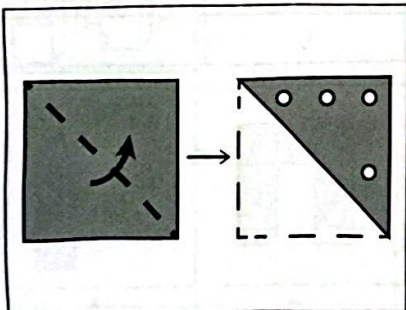


Which square creates the folded shape? Circle one of the options A–F.

Example

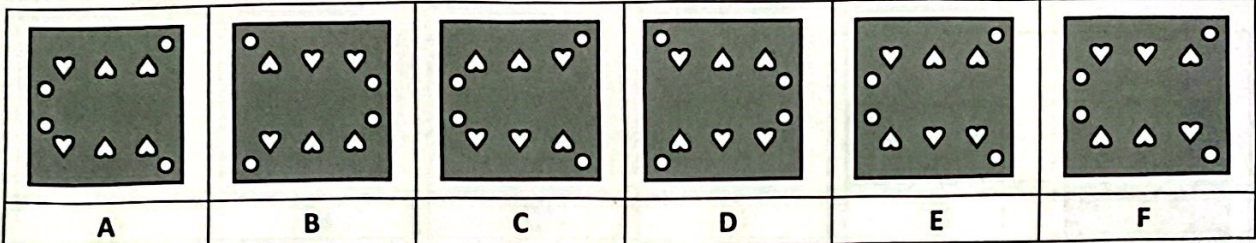
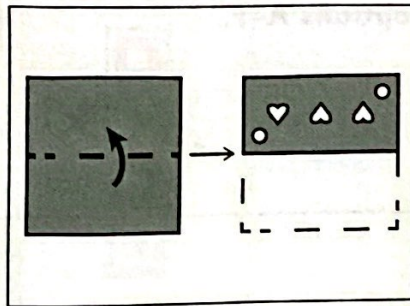


5

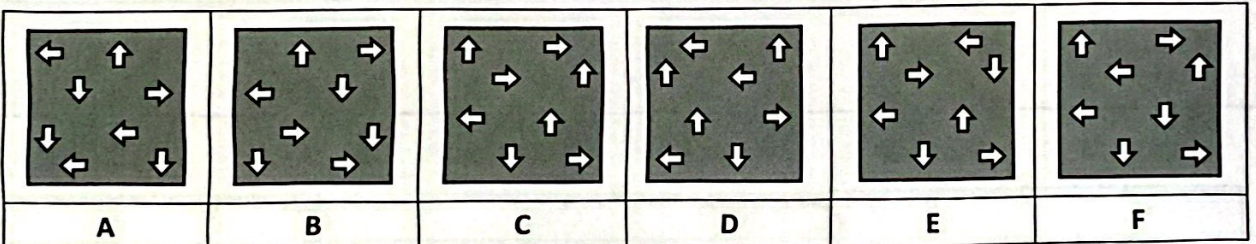
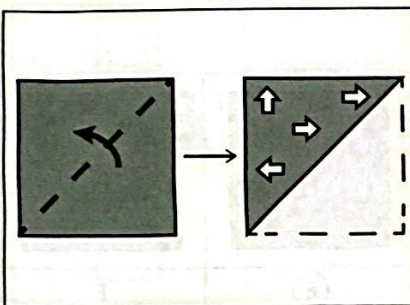




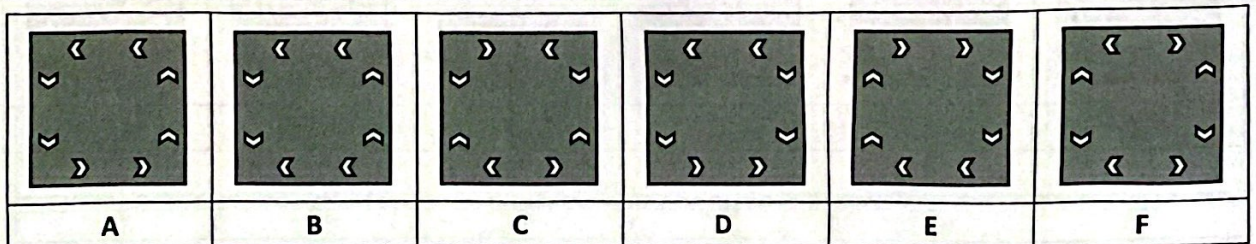
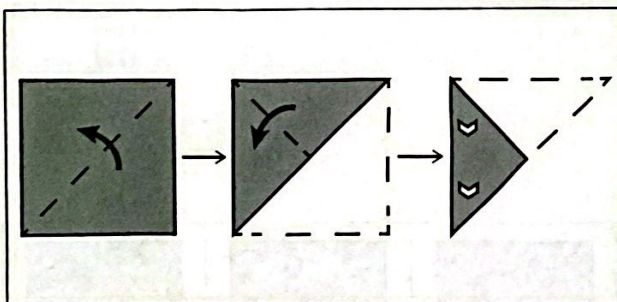
6



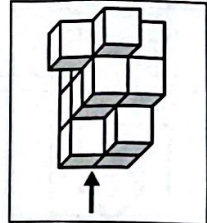
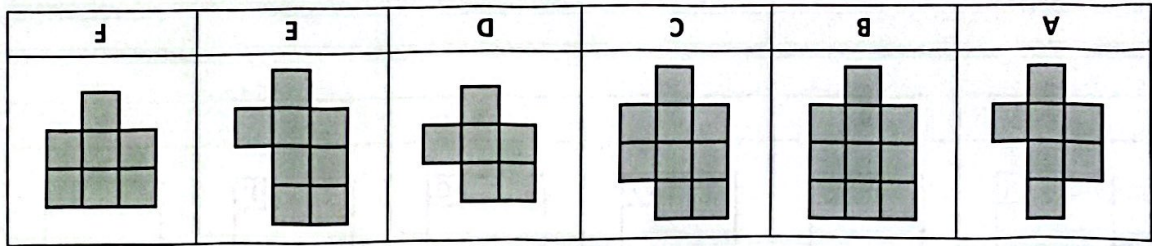
7



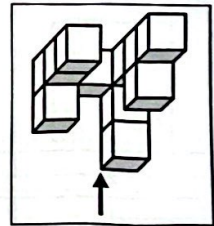
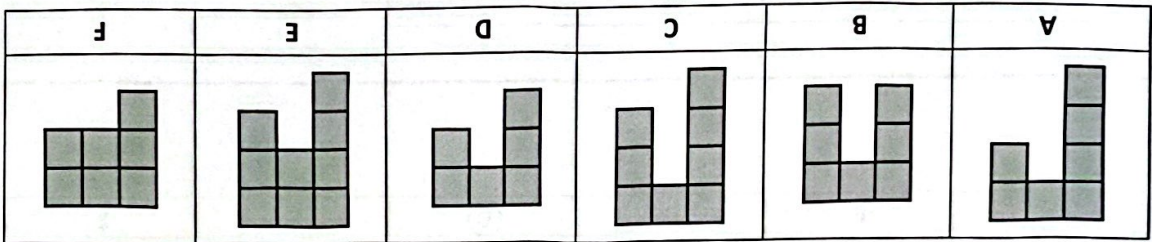
8



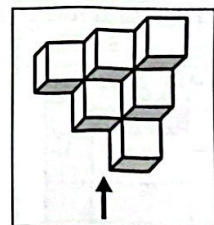
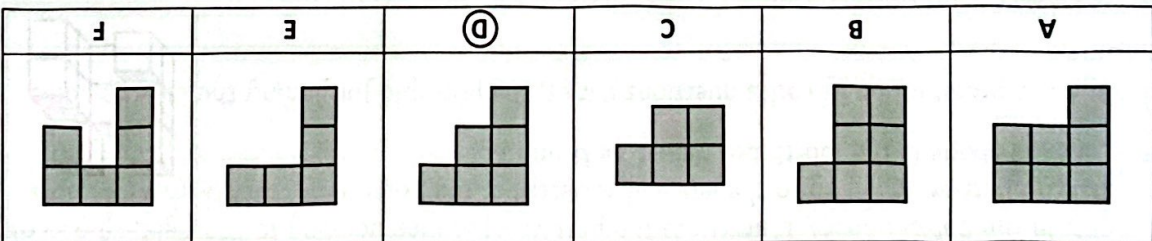




10



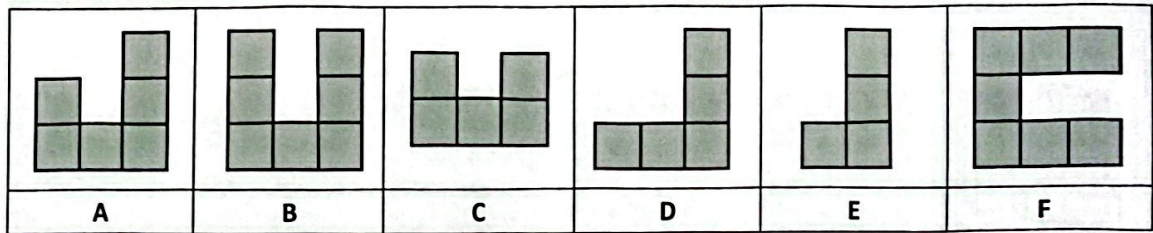
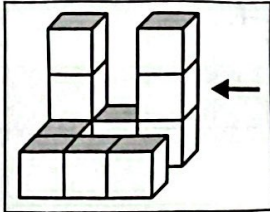
6



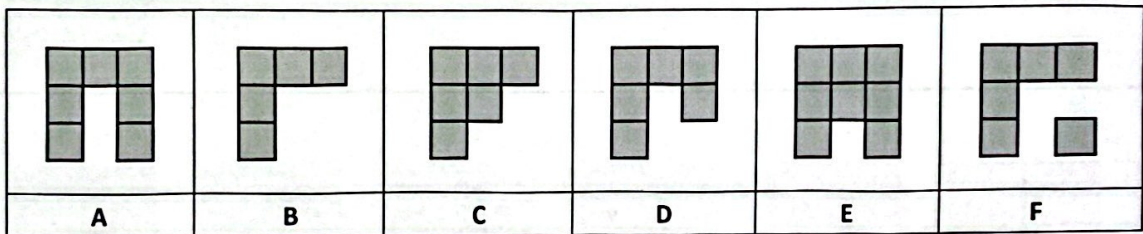
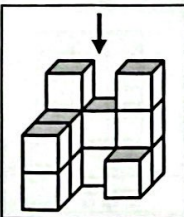
Example

Which 2D plan matches the 3D view? Circle one of the options A-F.

11



12





# Codes

In the boxes on the left there are three shapes with code letters. Each letter describes one part of the shape. Work out what each letter is describing. Find the code that describes the shapes or patterns in the fourth box. Circle one of the options A–F.

## Example

In the example, B describes the arrow pointing upwards and C describes the arrow pointing to the right. In the bottom boxes, L describes the pattern of stripes pointing to the right, M describes the pattern of stripes pointing to the left and K describes the pattern of black with white dots. Therefore the shape in the fourth box would be B and K.

Although the presentation of codes questions varies, the principle for finding the code remains the same.

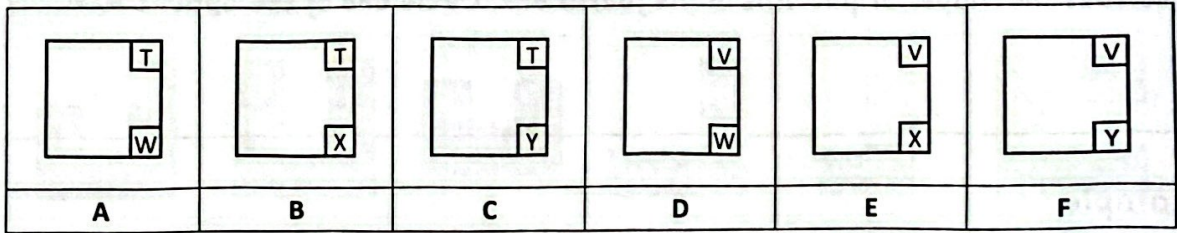
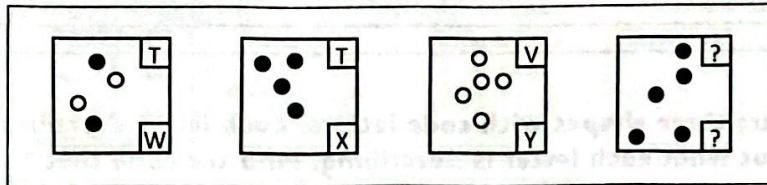
A	B	C	<b>D</b>	E	F

1

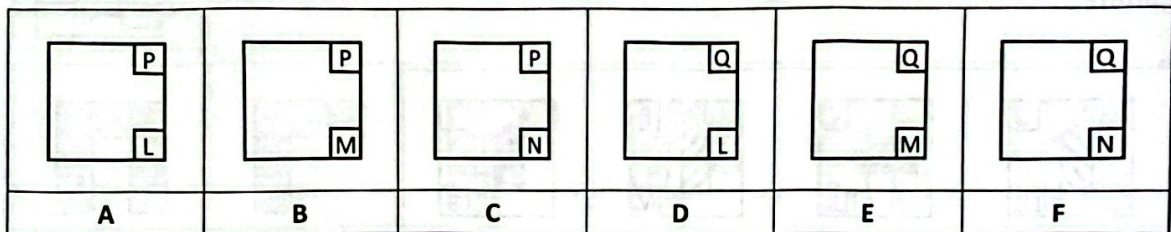
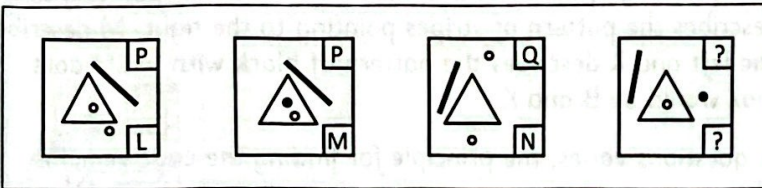
A	B	C	D	E	F



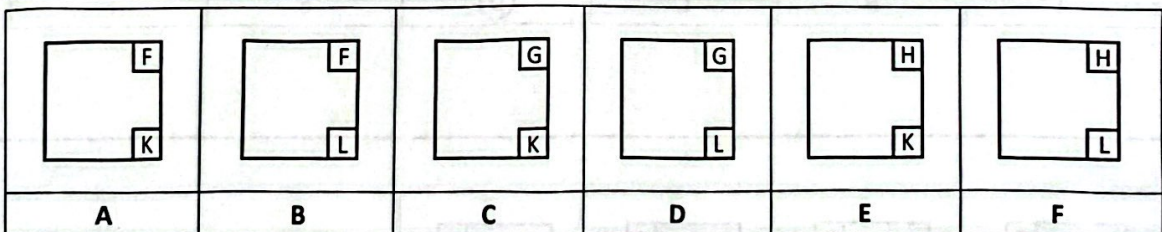
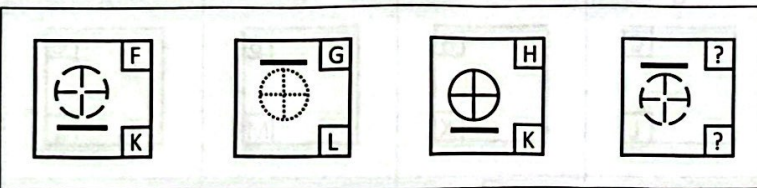
2



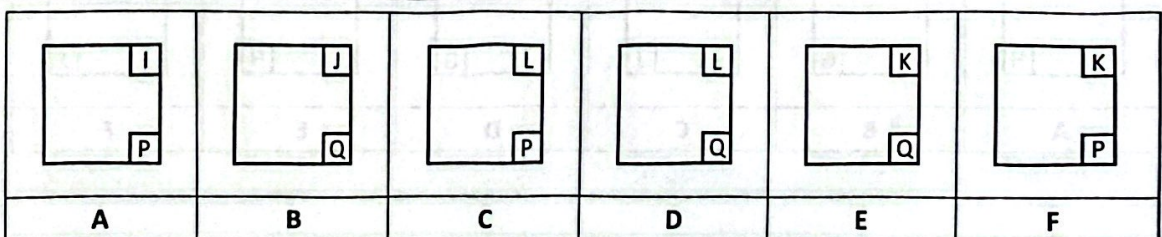
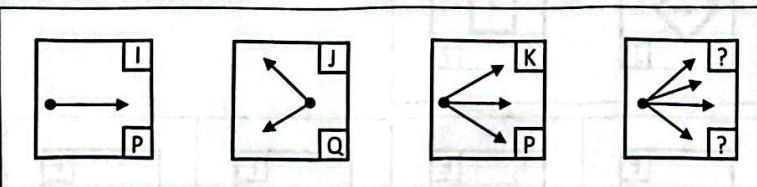
3



4

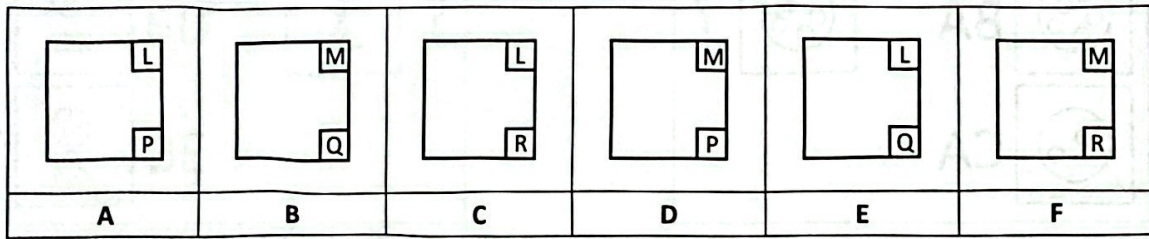
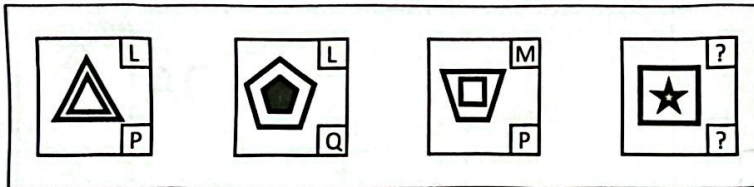


5

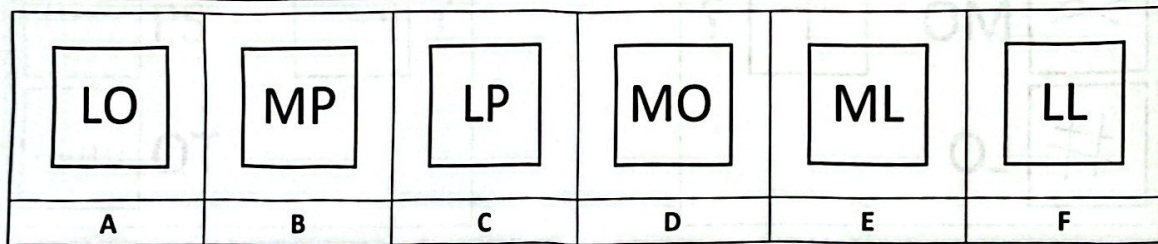
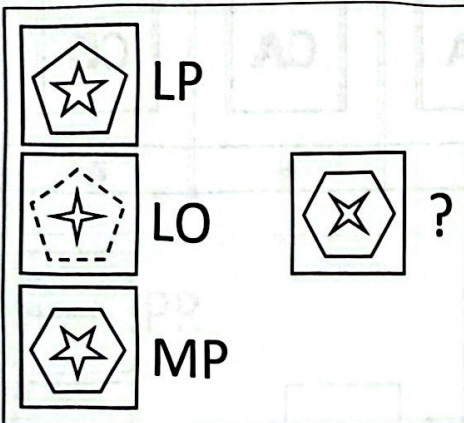




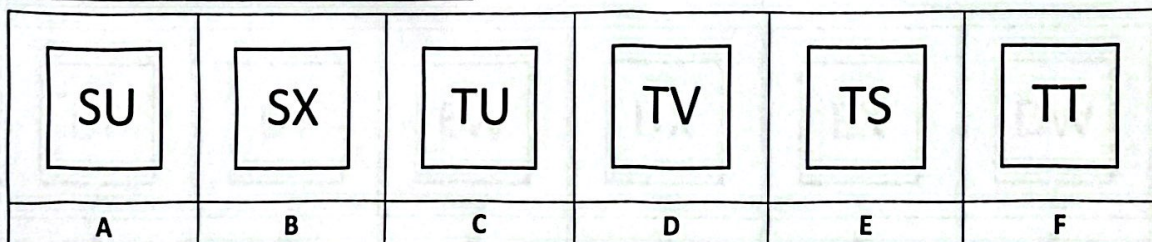
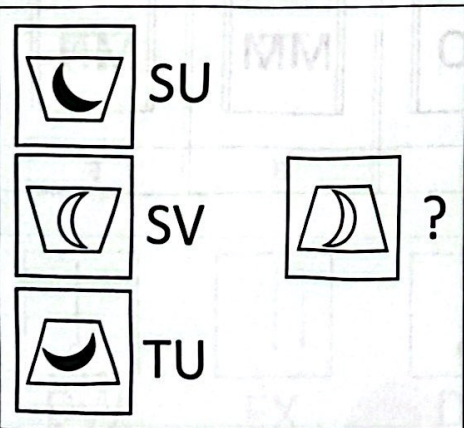
6



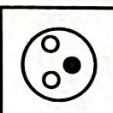
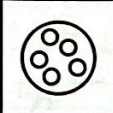

7



8

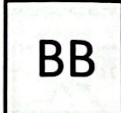

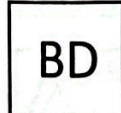
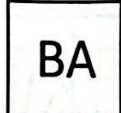

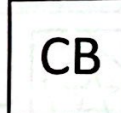


9

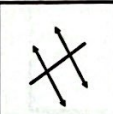


	BD
	BA
	CA

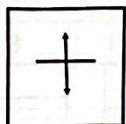


?


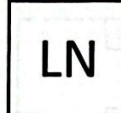




					
BB	CD	BD	BA	CA	CB
A	B	C	D	E	F

10

	LN
	MO
	LO



?

					
LO	LN	NO	MO	MM	MN
A	B	C	D	E	F



11

	AC	
	BD	?
	BE	

<div>BC</div>	<div>AD</div>	<div>AE</div>	<div>BD</div>	<div>BE</div>	<div>AC</div>
A	B	C	D	E	F

12

	PR	
	PS	?
	QT	

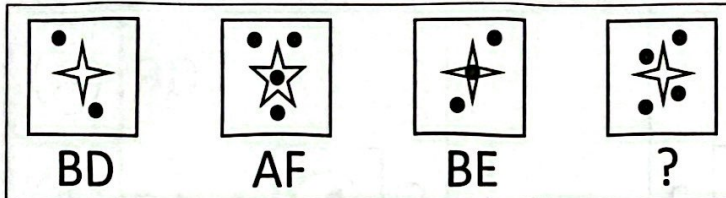
<div>PT</div>	<div>PT</div>	<div>QR</div>	<div>QT</div>	<div>PP</div>	<div>QS</div>
A	B	C	D	E	F

13

			?
DW	EX	DY	

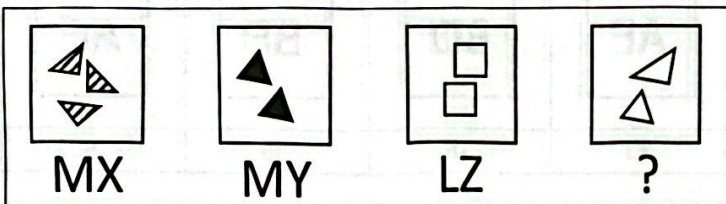
<div>EY</div>	<div>DY</div>	<div>EW</div>	<div>DX</div>	<div>EX</div>	<div>DW</div>
A	B	C	D	E	F

14



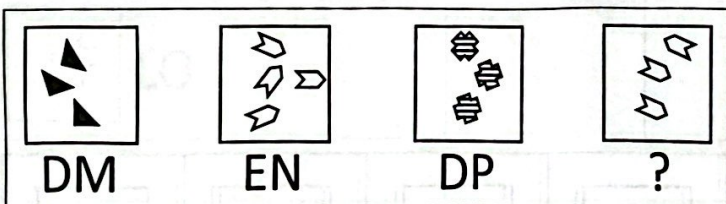
<div>BF</div>	<div>AD</div>	<div>BE</div>	<div>AE</div>	<div>BD</div>	<div>AF</div>
A	B	C	D	E	F

15



<div>MX</div>	<div>LX</div>	<div>MY</div>	<div>LZ</div>	<div>MZ</div>	<div>LY</div>
A	B	C	D	E	F

16



<div>EM</div>	<div>DN</div>	<div>FN</div>	<div>EN</div>	<div>DP</div>	<div>FP</div>
A	B	C	D	E	F

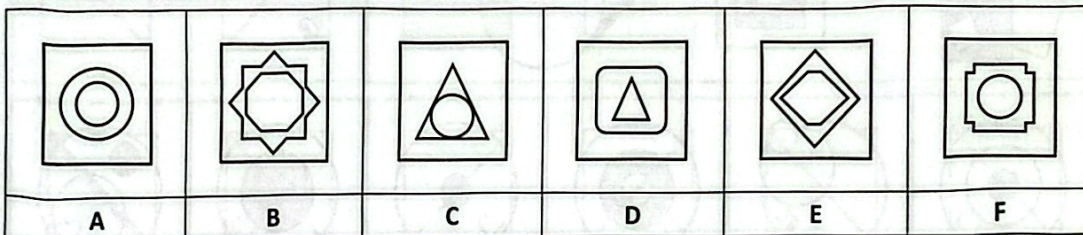
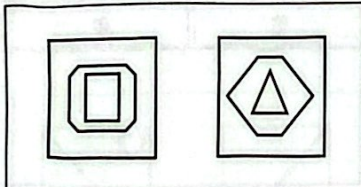


# Mixed Test 1

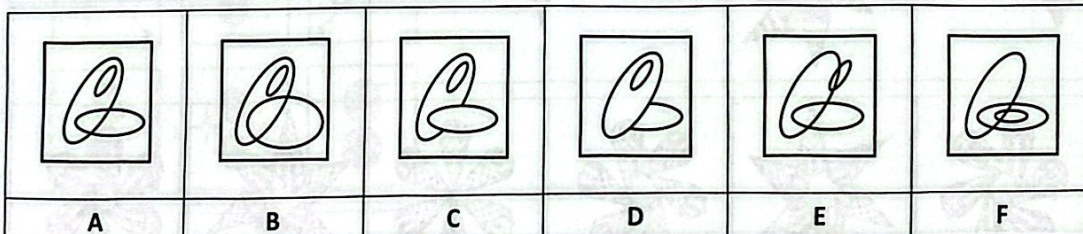
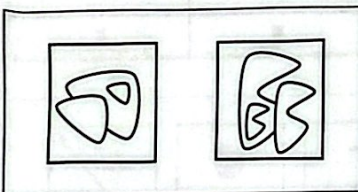
For each question, circle one of the answers A–F.

1

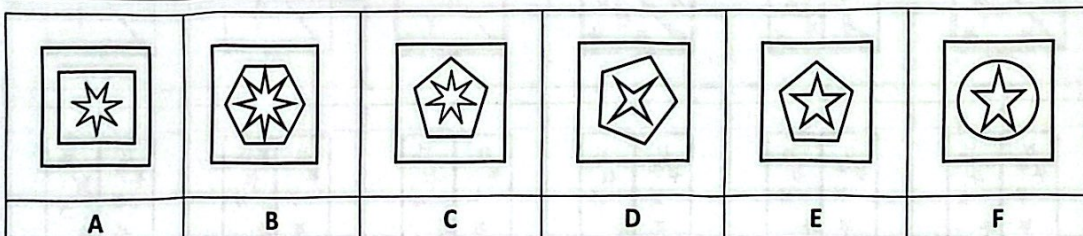
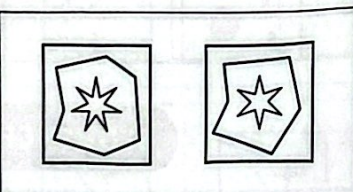
**SIMILARITIES**



2

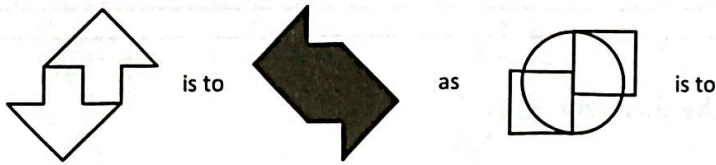


3

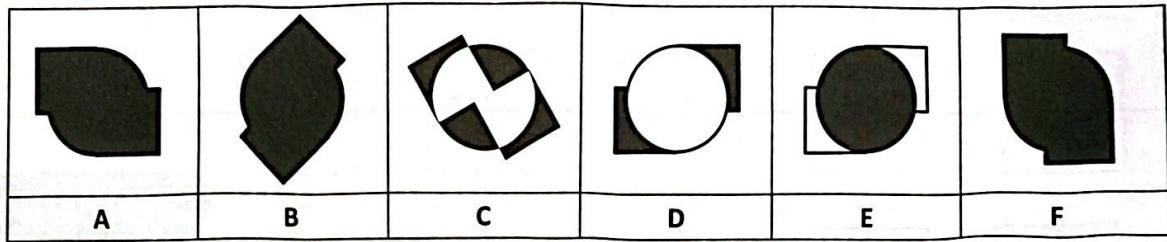




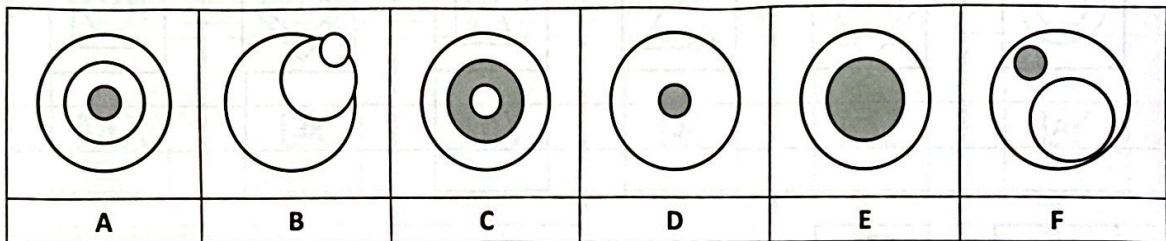
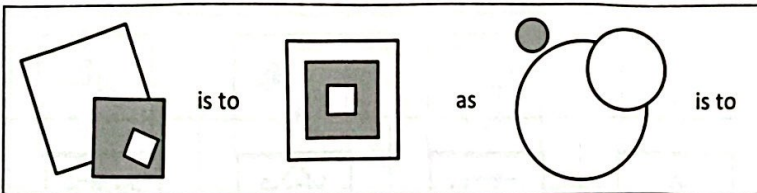
4



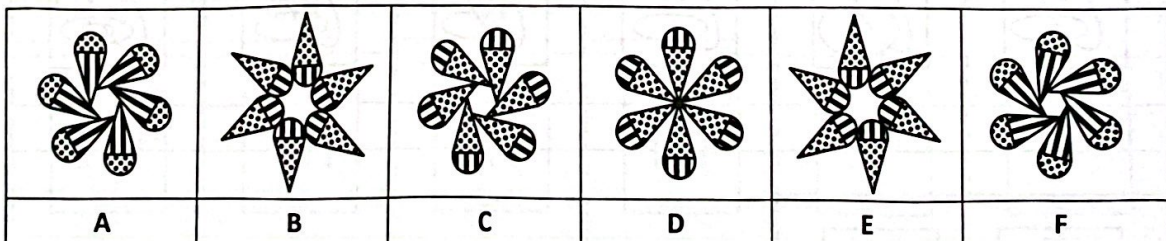
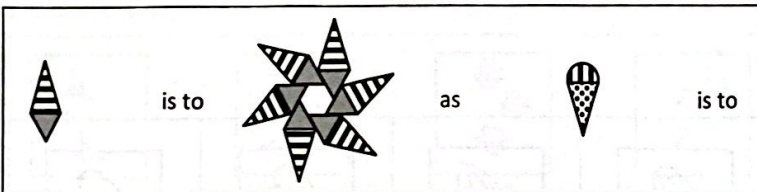
## ANALOGIES



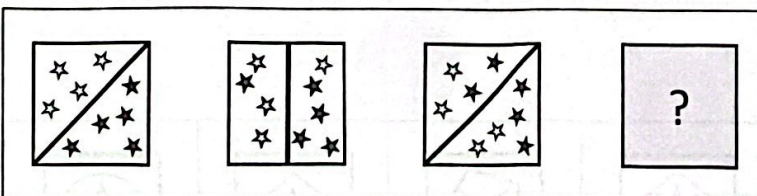
5



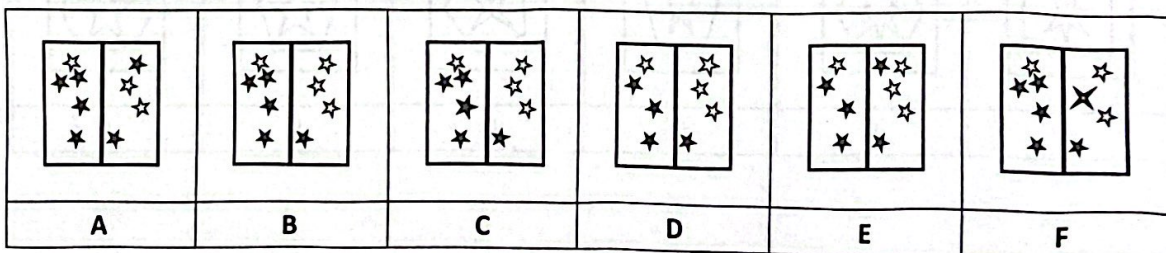
6



7

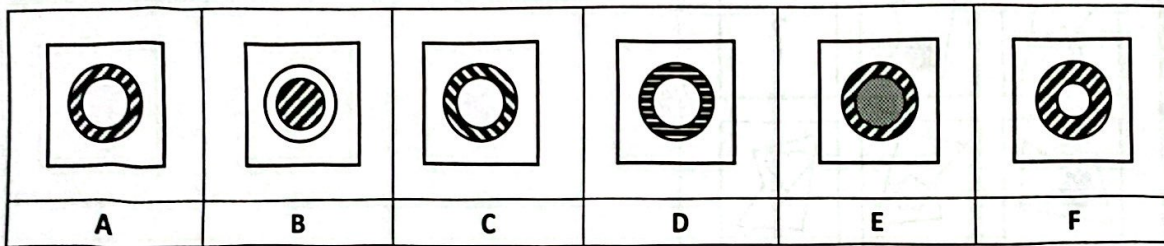
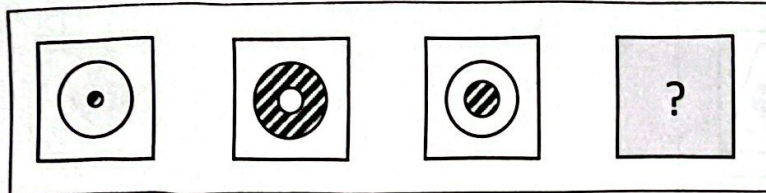


## SEQUENCES

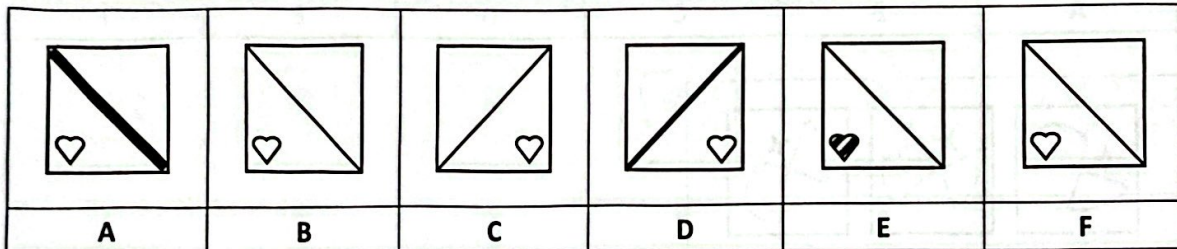
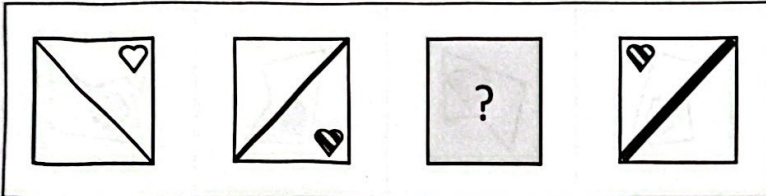




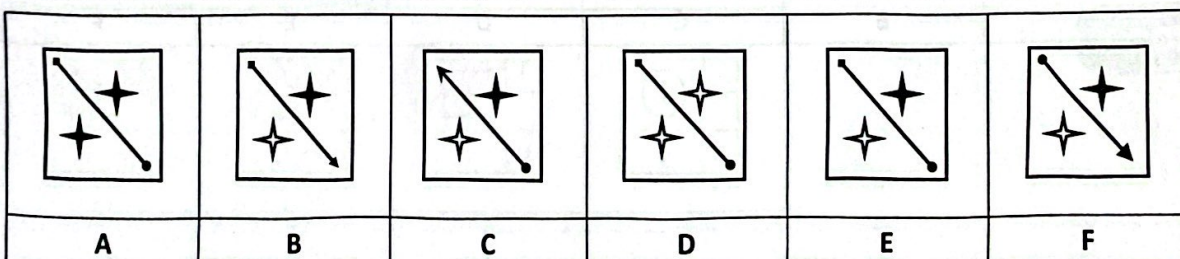
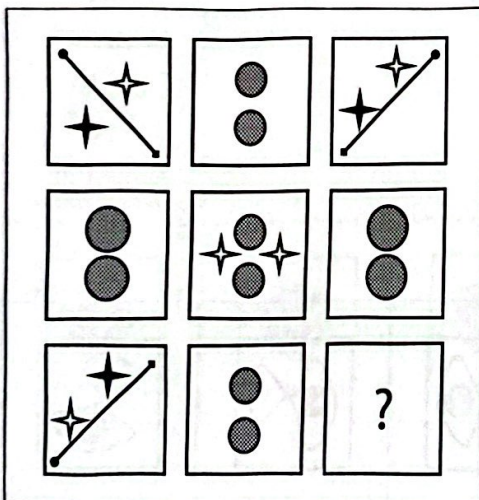
8



9

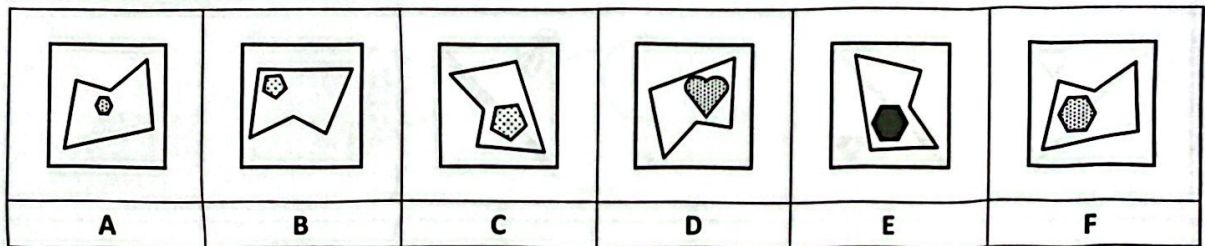
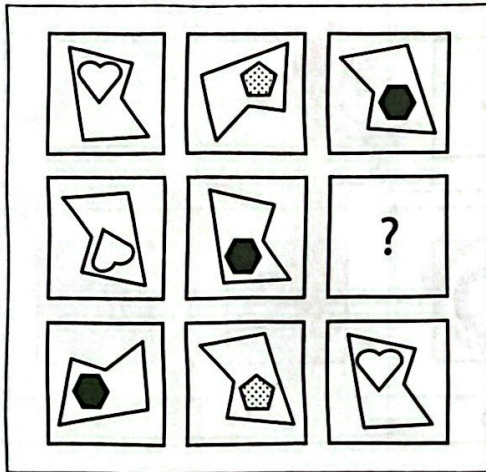


10

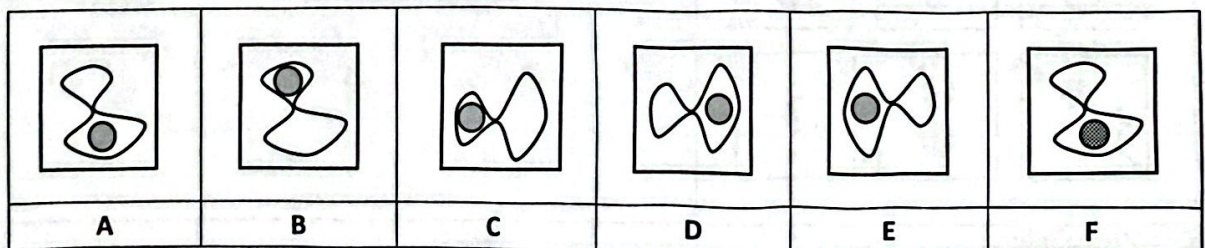
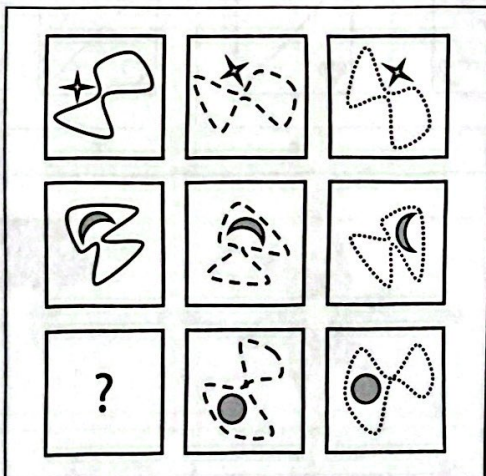


GRIDS

11



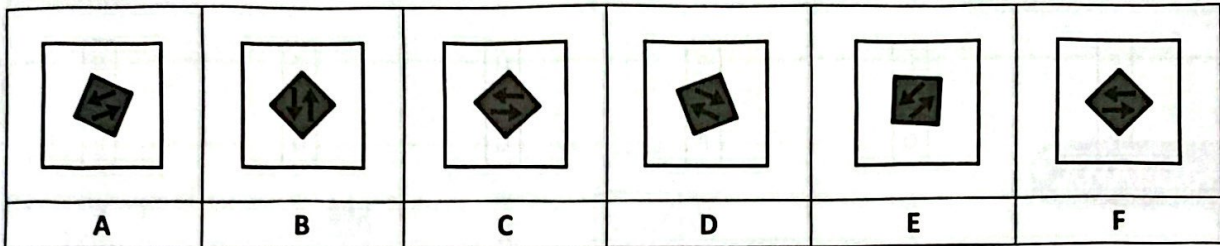
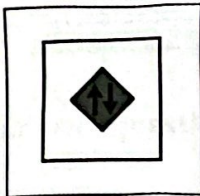
12



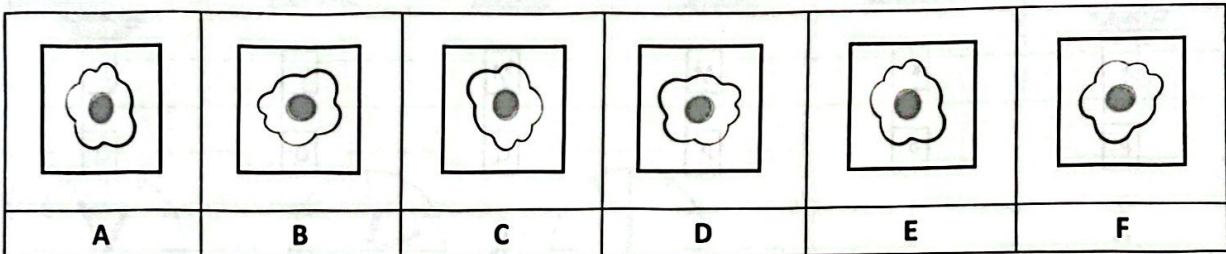
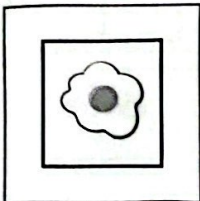


13

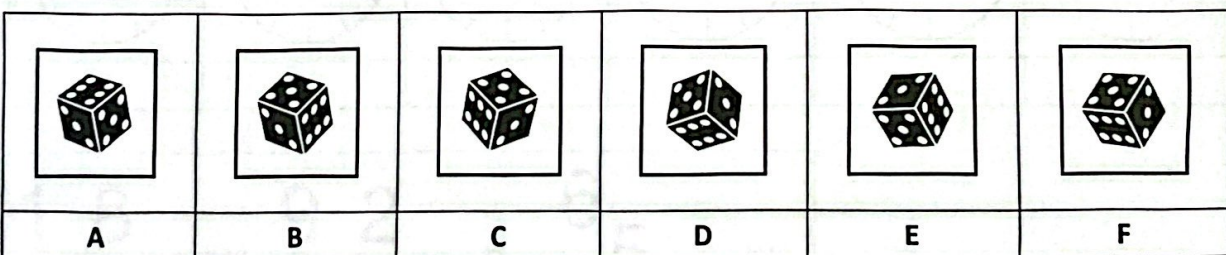
## ROTATIONS



14

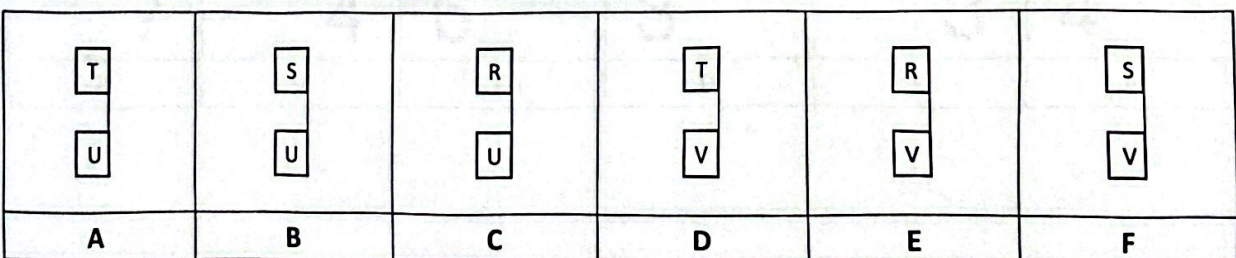
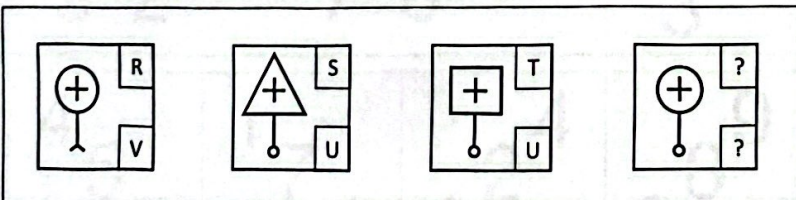


15

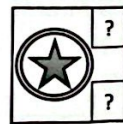
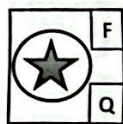


16

## CODES

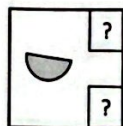
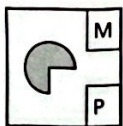
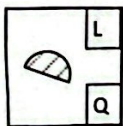
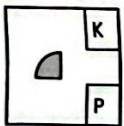


17



<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

18



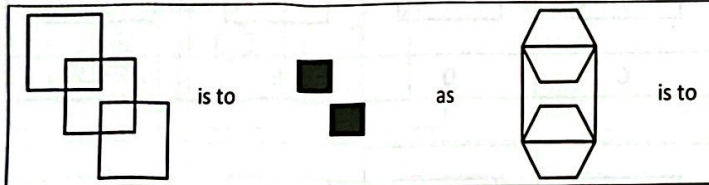
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>



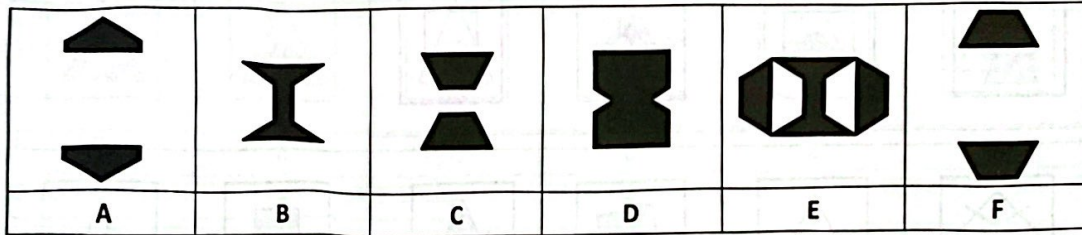
# Mixed Test 2

For each question, circle one of the answers A–F.

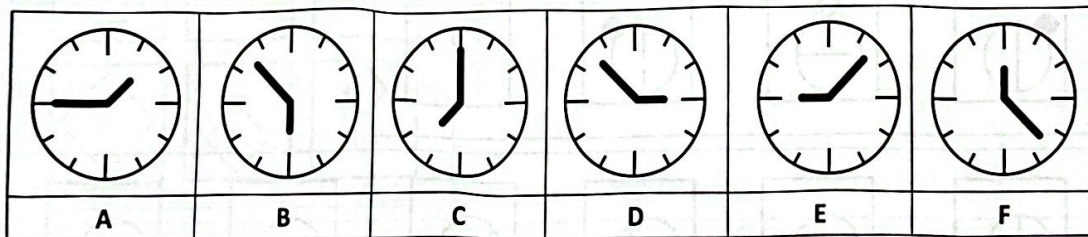
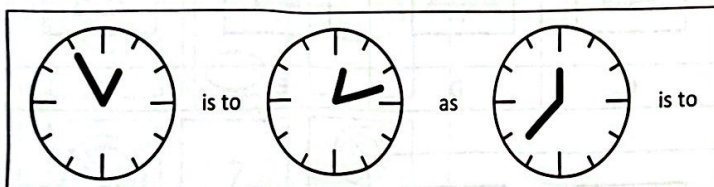
1



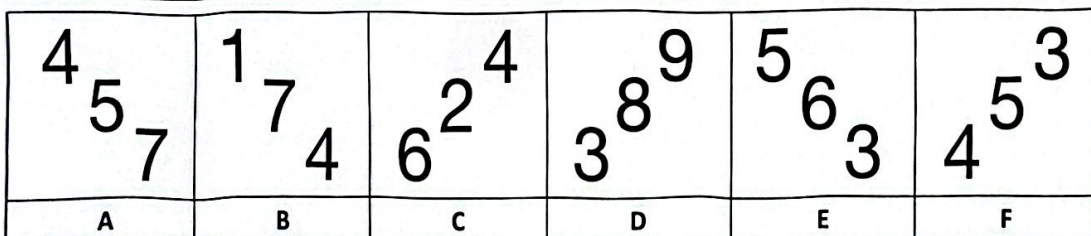
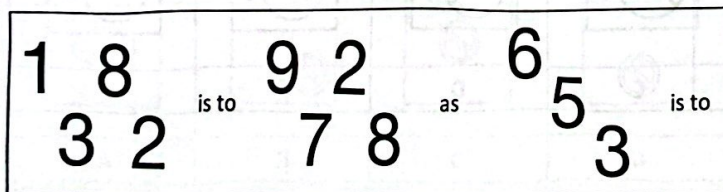
ANALOGIES



2

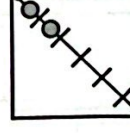
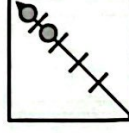
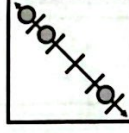
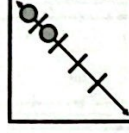
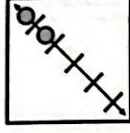
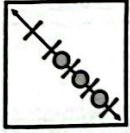
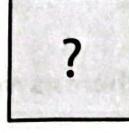
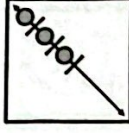
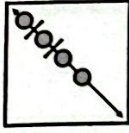
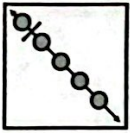


3



# SEQUENCES

4



A

B

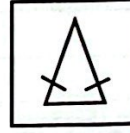
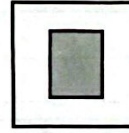
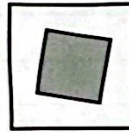
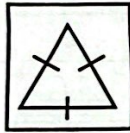
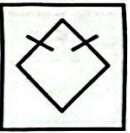
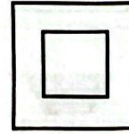
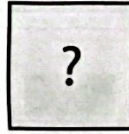
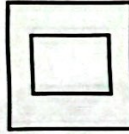
C

D

E

F

5



A

B

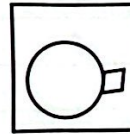
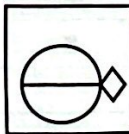
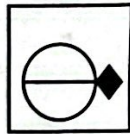
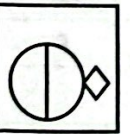
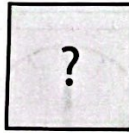
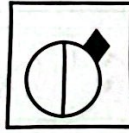
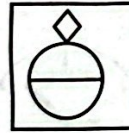
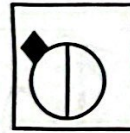
C

D

E

F

6



A

B

C

D

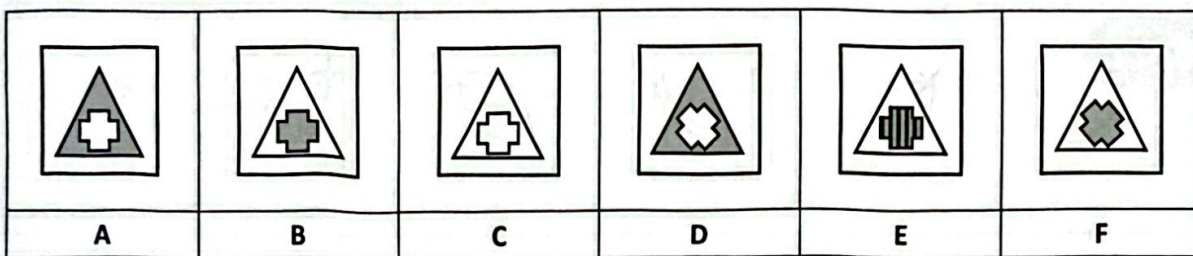
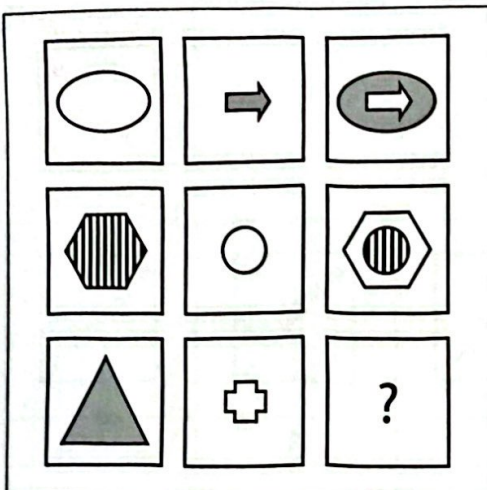
E

F

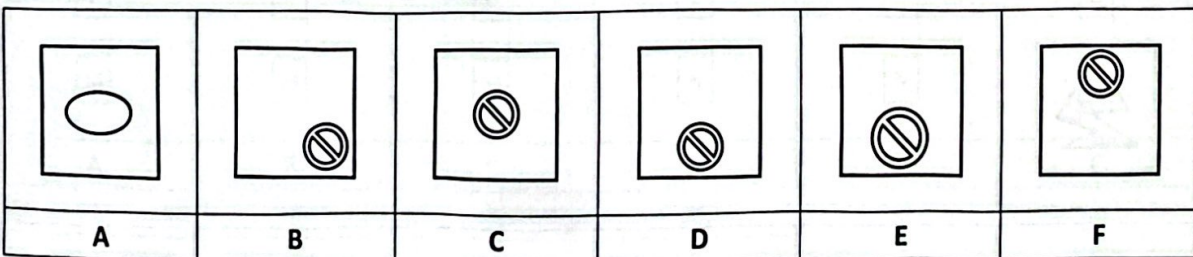
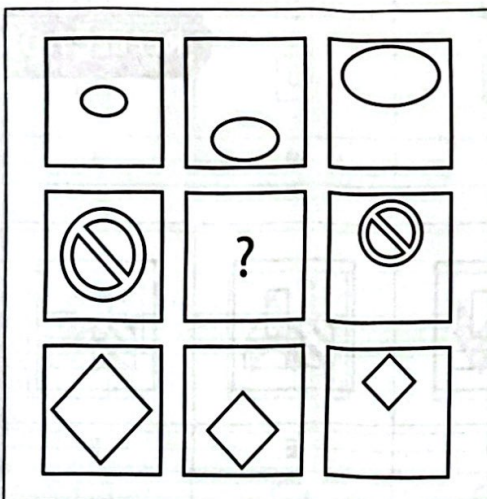


7

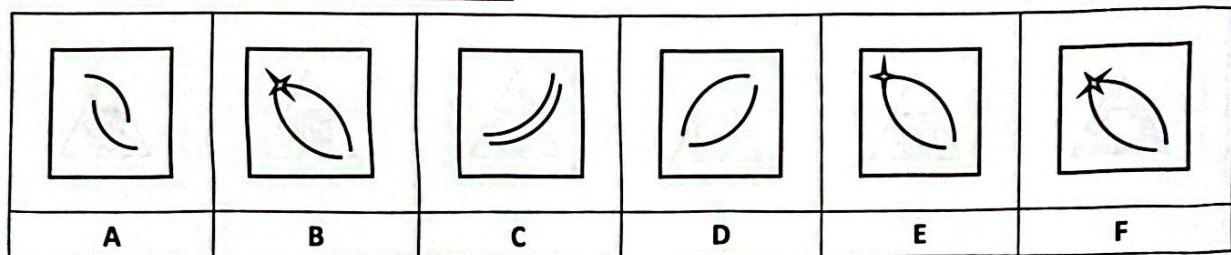
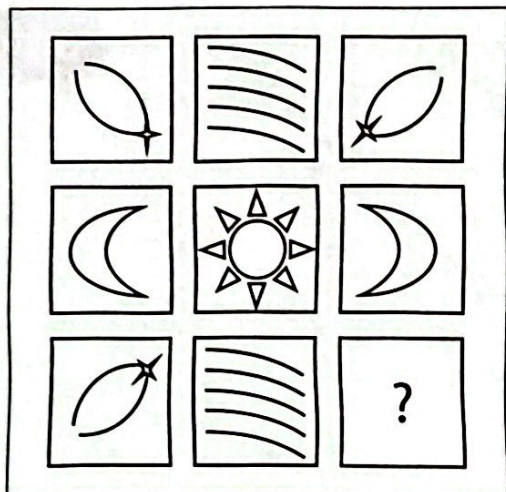
GRIDS



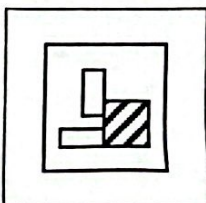
8



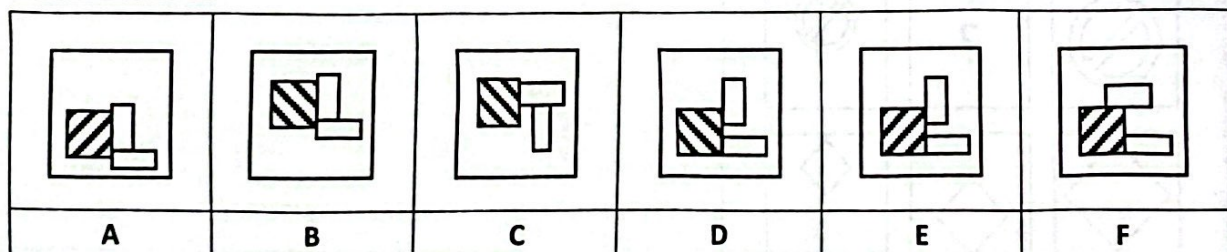
9



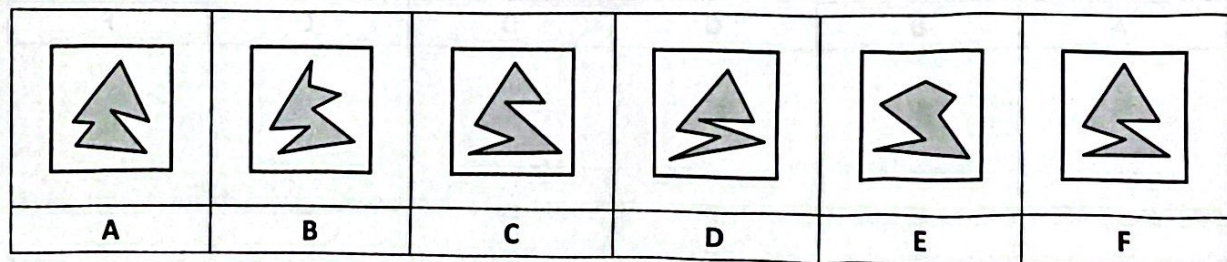
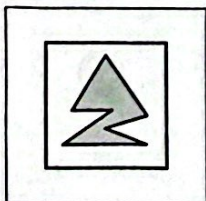
10



REFLECTIONS

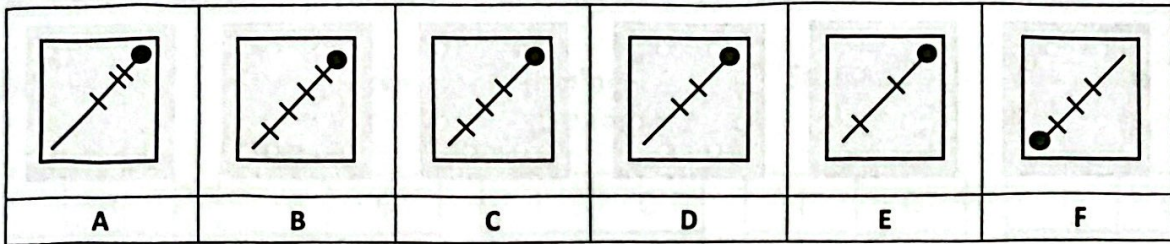
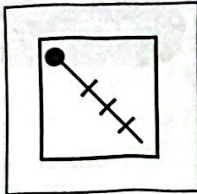


11

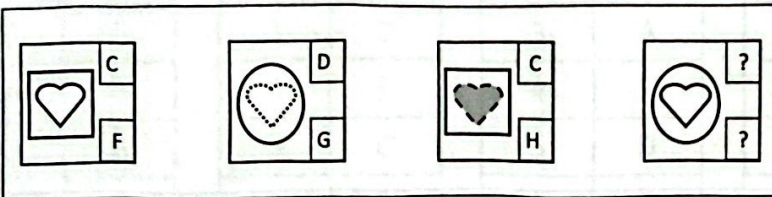




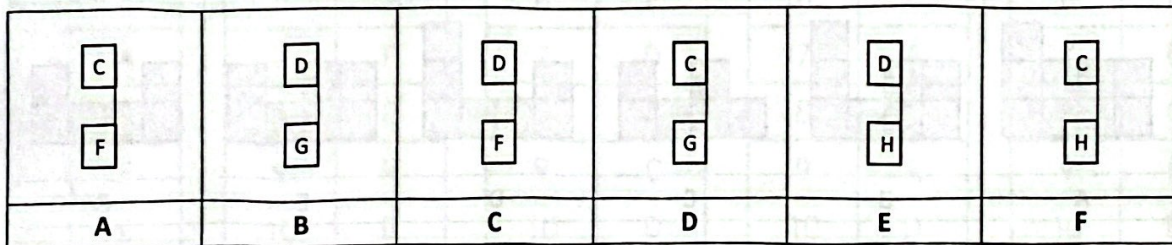
12



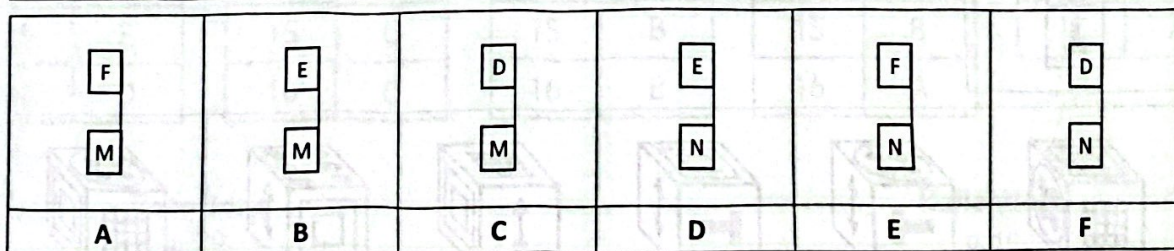
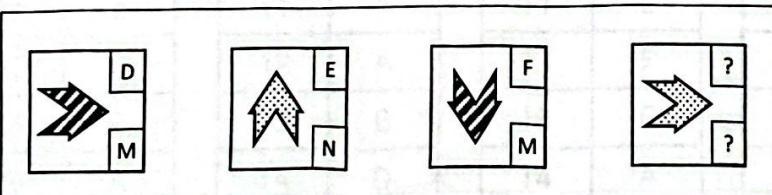
13



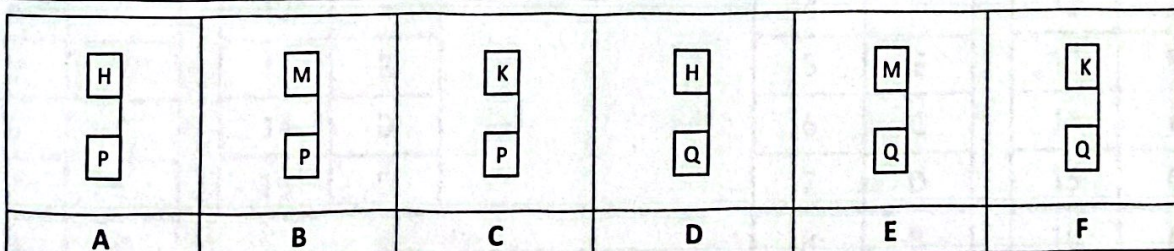
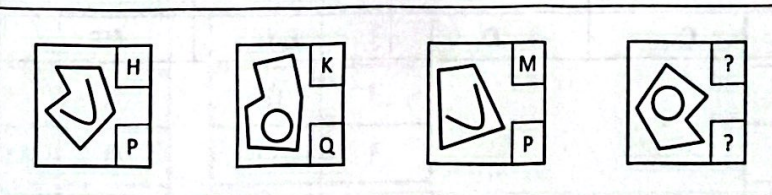
CODES



14



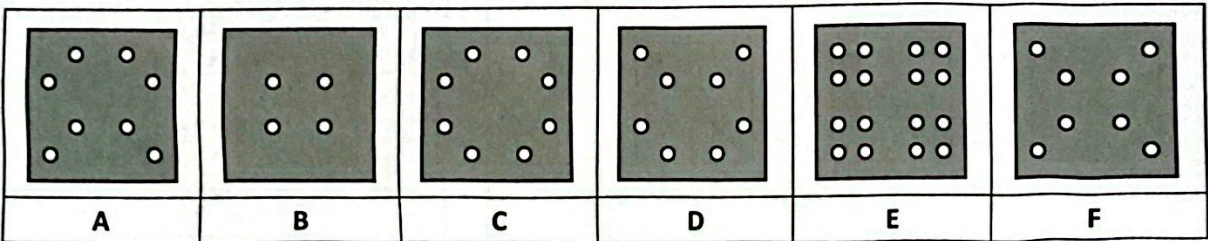
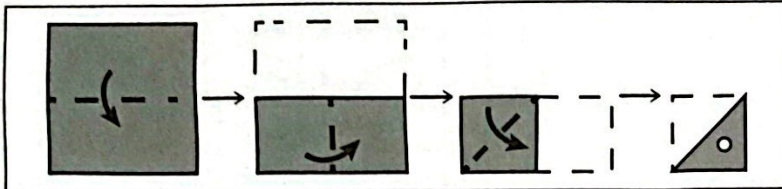
15



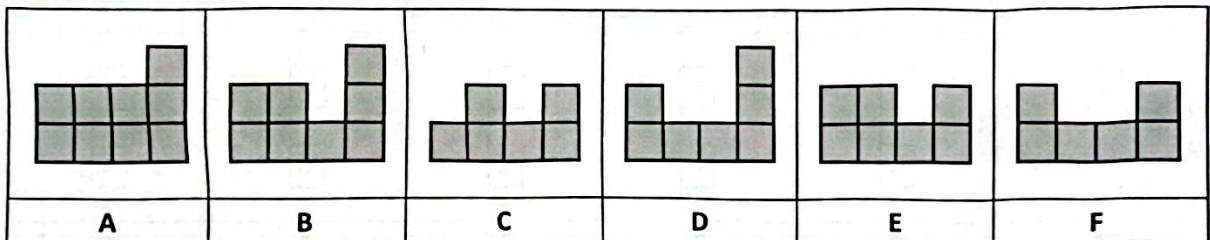
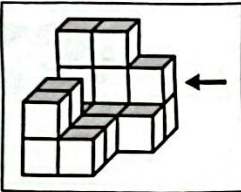


16

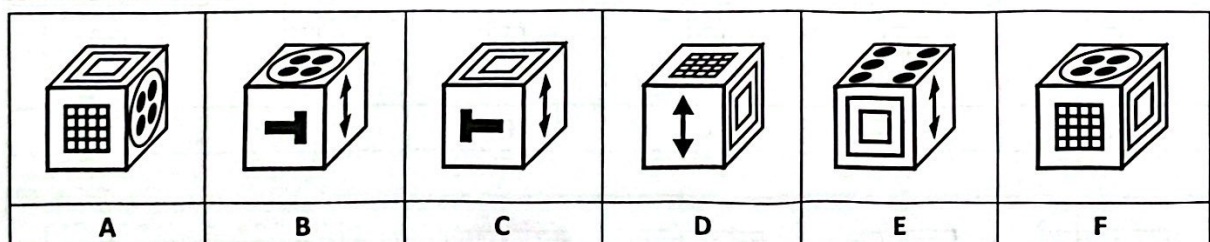
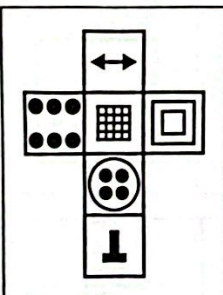
SPATIAL/3D



17



18





# Answers

Extended answers with useful explanations are available online at [www.scholastic.co.uk/pass-your-11-plus/extras](http://www.scholastic.co.uk/pass-your-11-plus/extras) or via the QR code opposite.



## Similarities p.5

1	C
2	C
3	F
4	B
5	B
6	E
7	A
8	F
9	E
10	E
11	E
12	C
13	E
14	A
15	E
16	D

## Differences p.10

1	C
2	F
3	D
4	F
5	C
6	A
7	F
8	E
9	F
10	E
11	F
12	A
13	B
14	D
15	C
16	C

## Analogies p.13

1	C
2	D
3	A
4	F
5	D
6	E
7	D
8	B
9	C
10	D
11	E
12	F
13	C
14	A
15	B
16	B

## Sequences p.18

1	C
2	C
3	E
4	A
5	B
6	C
7	A
8	F
9	A
10	D
11	D
12	C
13	B
14	D
15	B
16	A

## Grids p.23

1	C
2	C
3	E
4	A
5	F
6	B
7	B
8	C
9	F
10	B
11	D
12	A
13	E
14	D
15	A

## Rotations p.29

1	D
2	A
3	D
4	C
5	B
6	C
7	F
8	B

9	E
10	E
11	F
12	E
13	B
14	D
15	D

## Reflections p.34

1	F
2	E
3	C
4	D
5	E
6	C
7	D
8	B

9	F
10	C
11	F
12	A
13	B
14	E
15	C
16	F



# Answers

## 3D and Spatial Reasoning p.39

1	B
2	E
3	B
4	A
5	A
6	E
7	C
8	E

9	C
10	E
11	F
12	D

## Codes p.45

1	D
2	E
3	D
4	B
5	C
6	D
7	D
8	D

9	B
10	F
11	C
12	F
13	A
14	A
15	E
16	B

## Mixed Test 1 p.51

1	Similarities	B
2	Similarities	C
3	Similarities	E
4	Analogies	F
5	Analogies	A
6	Analogies	C
7	Sequences	E
8	Sequences	A
9	Sequences	F
10	Grids	E
11	Grids	C
12	Grids	A
13	Rotations	D
14	Rotations	D
15	Rotations	B
16	Codes	C
17	Codes	C
18	Codes	A

## Mixed Test 2 p.57

1	Analogies	C
2	Analogies	E
3	Analogies	A
4	Sequences	C
5	Sequences	D
6	Sequences	E
7	Grids	B
8	Grids	D
9	Grids	E
10	Reflections	D
11	Reflections	F
12	Reflections	C
13	Codes	C
14	Codes	F
15	Codes	D
16	Spatial/3D	F
17	Spatial/3D	B
18	Spatial/3D	A



# NON-VERBAL REASONING PRACTICE AGES 10-11

*'Great quality, imaginatively written'*

**Dr Samina Rashid, 11+ tutor**

Prepare for the CEM 11+ tests with authentic multiple-choice practice activities. Sharpen non-verbal reasoning skills for the CEM 11+ Test. Packed with targeted practice and opportunities for children to test their understanding on key topics including 3D and spatial reasoning. Contains a range of non-verbal reasoning question types along with short answer grids.

- Authentic CEM-style question formats
- Includes mix of practice and assessment
- Covers key 11+ non-verbal reasoning question types including 3D and spatial reasoning

## Where next?



## ABOUT THE SERIES EDITOR

**Tracey Phelps** is a professional 11+ tutor who runs **11 PLUS LEAP** in Gloucestershire. She works with children on a one-to-one basis and in small group settings to prepare them for the CEM 11+ test through her successful 11+ course.



**In 2019 96% of 11 PLUS LEAP students achieved success in their entrance exams**

11+ Non-verbal Reasoning  
Ages 10-11

£6.99

 **SCHOLASTIC**

ISBN 978-0-7023-3218-0



9 780702 332180